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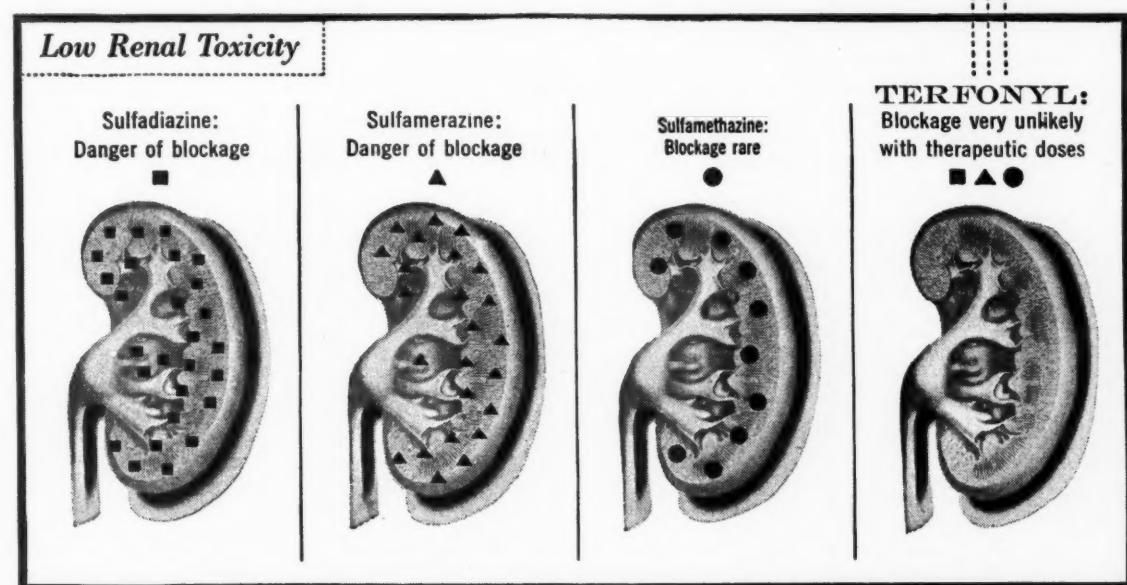
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V. H. Dumond	230 Shearer Building, Bay City
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E. T. Morden	109 E. Maumee Street, Adrian
R. W. Teed	215 S. Main Street, Ann Arbor
Arch Walls	12065 Wyoming Ave., Detroit
H. B. Zemmer	Clay Street, Lapeer

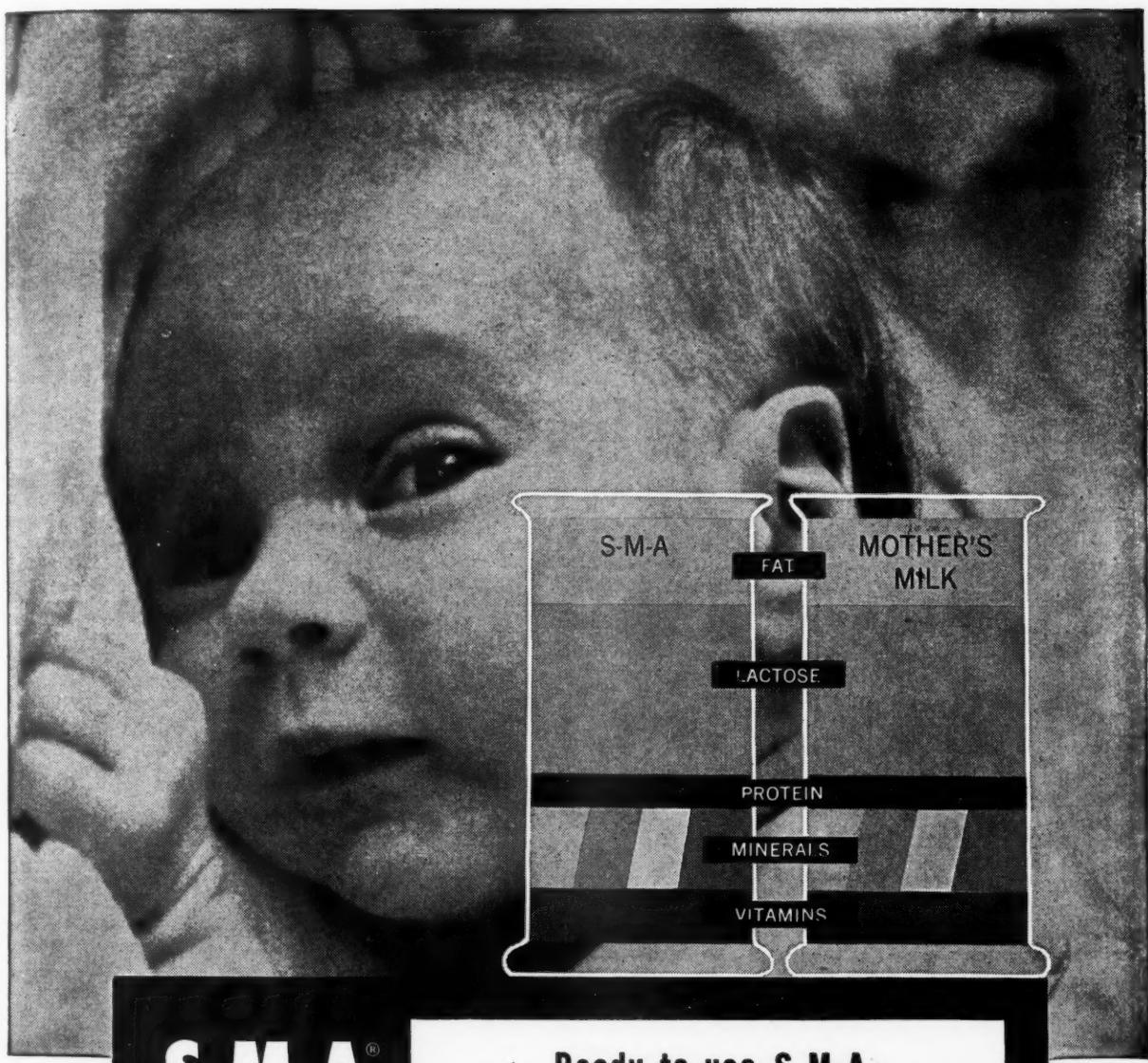
Legislative Committee

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E. R. Addison	Crystal Falls
O. B. Beck	274 W. Maple, Birmingham
W. A. Chipman	14920 Grand River, Detroit
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C. B. Gardner	320 Townsend, Lansing
T. J. Kane	179 S. Strong Avenue, Muskegon
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H. L. Morris	1069 Fisher Building, Detroit
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G. W. Reuter	Allen Clinic, Bay City
E. W. Schnoor	216 Medical Arts Building, Grand Rapids
G. W. Slagle	1206 Security Tower, Battle Creek
J. G. Slevin	1514 David Broderick Tower, Detroit
R. A. Springer	Centerville
Charles Ten Houten	Paw Paw
F. L. Troost	Holt
C. E. Umphrey	13331 Livernois, Detroit
R. V. Walker	1255 David Whitney Bldg., Detroit

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G. J. Curry (1951)	401 Genesee Bank Building, Flint
A. C. Furstenberg (1951)	1313 E. Ann Street, Ann Arbor
L. J. Gariepy (1952)	16401 Grand River, Detroit
John Heidenreich (1950)	Daggett
A. C. LaBine (1952)	Houghton
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J. M. Robb (1950)	641 David Whitney Building, Detroit
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W. J. Smith (1950)	Cadillac
E. D. Spalding (1950)	10 Peterboro, Detroit
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(Concluded on Page 506)



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(Continued from Page 504)

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H. H. Cummings	Dept. Postgraduate Med., U. of M., Ann Arbor
J. M. Dorsey	65 Moss, Highland Park
Cameron Haight	2112 Vinewood, Ann Arbor
A. E. Heustis	Michigan Dept. of Health, Lansing
R. B. Kennedy	2108 David Broderick Tower, Detroit
R. D. McClure	2799 W. Grand Blvd., Detroit
N. F. Miller	1313 E. Ann Street, Ann Arbor
L. W. Shaffer	3852 Bishop Road, Detroit
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F. E. Curtis	10 Peterboro, Detroit
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N. R. Moore	Shearer Building, Bay City
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W. L. Harrigan (1953)	Mt. Pleasant
L. C. Harvie (1950)	405 Wiechman Building, Saginaw
H. B. Hoffman (1952)	119½ Ludington, Ludington
G. B. Hoops (1953)	754 Fisher Bldg., Detroit
L. J. Morand (1951)	641 David Whitney Bldg., Detroit
W. E. Nesbitt (1951)	31 Second Avenue, Alpena

Industrial Health Committee

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A. L. Brooks	Med. Dir., Fisher Body Division, Flint
W. P. Chester	5057 Woodward, Detroit
Henry Cook	326 Genesee Bank Bldg., Flint
W. A. Dawson	25951 Avondale Rd., Inkster
H. H. Gay	Dow Chemical Co., Midland
Raymond Hussey	1547 Penobscot Bldg., Detroit
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J. S. Lambie	Fisher Body, Pontiac
V. S. Laurin	804 Hackley Union Bank Bldg., Muskegon
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R. D. Mudd	Chevrolet Iron Foundry, Saginaw
N. W. Scholle	Anderson Building, Muskegon Heights
H. T. Sethney	Electric Square Building, Menominee
M. W. Shellman	Metz Building, Grand Rapids
A. H. Whittaker	1427 E. Jefferson, Detroit
J. L. Zemens	1761 Broadstone, Grosse Pointe Woods
C. D. Selby, <i>Advisory</i>	Univ. of Michigan School of P. H., A. A.

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*C. J. Barone	51 Eason, Highland Park
C. W. Oakes	Harbor Beach
C. A. Payne	Blodgett Memorial Hospital, Grand Rapids
Sherwood Russell	104 N. Oakland Street, St. Johns
R. W. Ullrich	91 Cass Avenue, Mt. Clemens

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W. D. Barrett	311 David Whitney Bldg., Detroit
C. A. Payne	Blodgett Medical Hospital, Grand Rapids
Wm. Bromme	10 Peterboro, Detroit
W. E. Barstow	St. Louis

*Deceased.

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SIZE CHANGES* EVERY

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Short Shoes Can Start Serious Foot Troubles

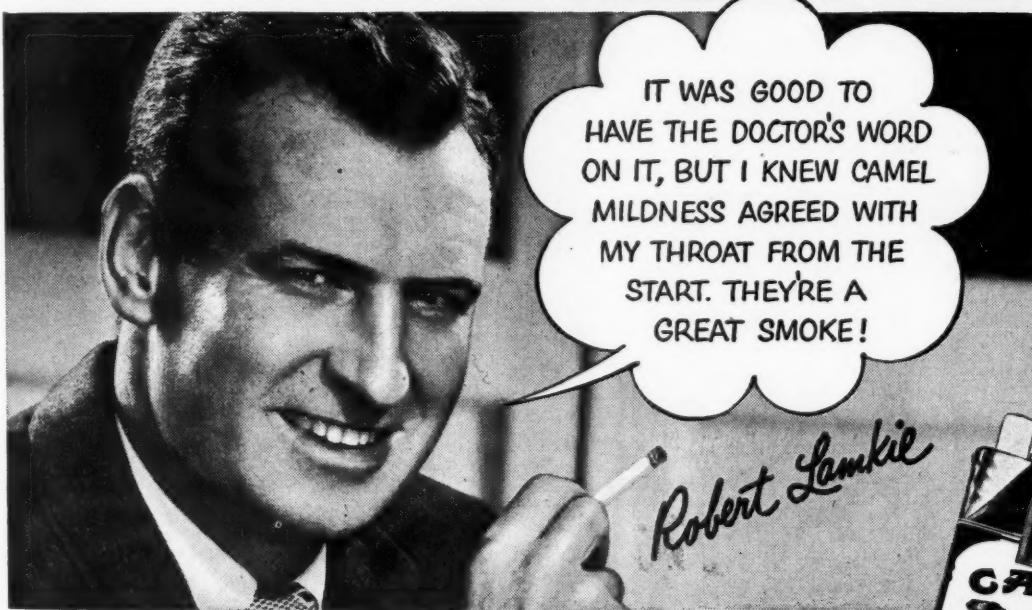
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*According to the National Foot Health Council.

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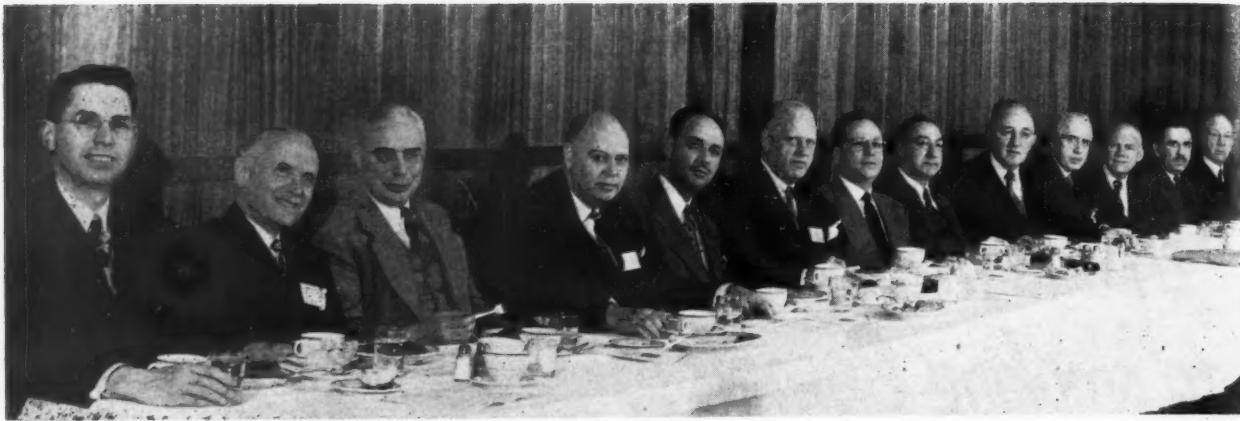


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Speakers' table at Industrial Health Day Banquet honoring A. H. Whittaker, M.D., Detroit, President of the American Association of Industrial Physicians and Surgeons.

Left to right: A. E. Heustis, M.D., Lansing, Frank Griffin, M.D., Toronto, Canada, Carl E. Badgley, M.D., Ann Arbor, E. C. Holmlund, M.D., Chicago, Joseph L. Zemens, M.D., Detroit, A. H. Whittaker, M.D., Detroit, E. A. Irvin, M.D., Detroit, John A. Schindler, M.D., Monroe, Wisconsin, C. E. Umphrey, M.D., Detroit, Max R. Burnell, M.D., Detroit, A. C. Furstenberg, M.D., Ann Arbor, G. H. Scott, Ph.D., Detroit and H. J. Pyle, M.D., Grand Rapids.

A.A.I.P.S. President A. H. Whittaker, M.D., Honored at Michigan's First Industrial Health Day

Approximately one hundred outstanding industrial surgeons and physicians gathered in Ann Arbor, March 29, on the occasion of the first Michigan Industrial Health Day. The March meeting was sponsored by the Michigan Association of Industrial Physicians and Surgeons and the Michigan State Medical Society along with the University of Michigan Medical School and School of Public Health, the Wayne University College of Medicine and the Division of Industrial Health of the Michigan Health Department.



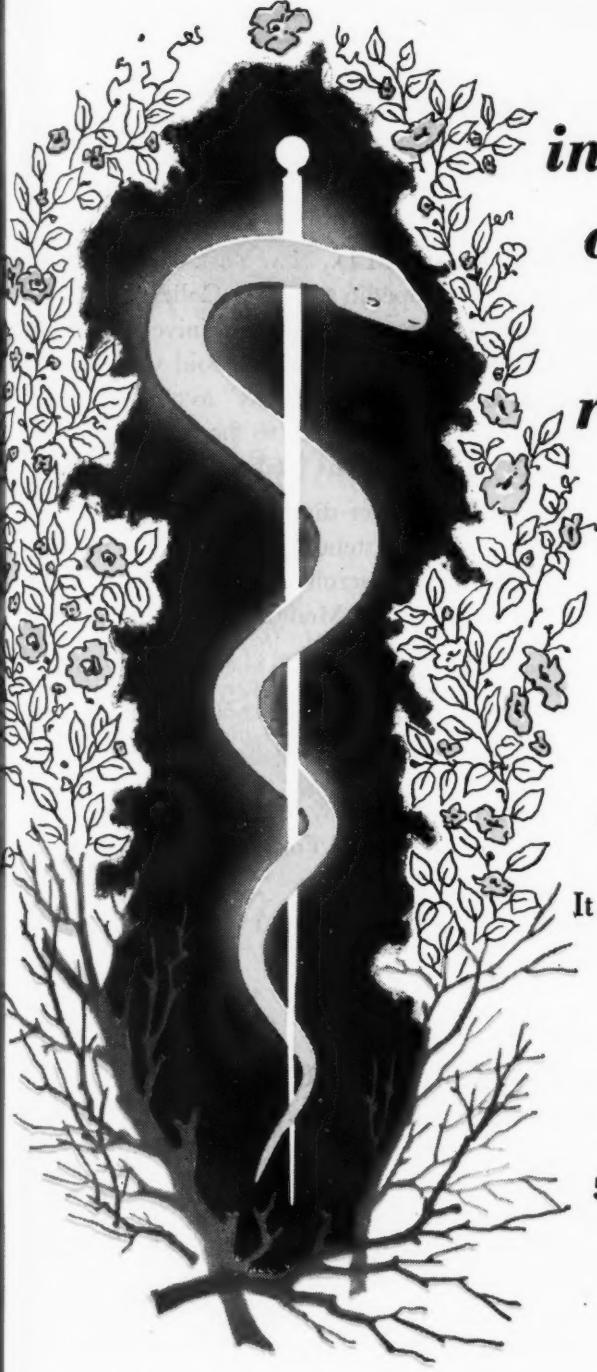
A. H. Whittaker, M.D., Detroit, President of the American Association of Industrial Physicians and Surgeons, accepts combination clock-barometer presented by Joseph L. Zemens, M.D. (left), President of the Michigan Association, on behalf of its membership.



A. H. Whittaker, M.D. (left), honored guest, thanks C. E. Umphrey, M.D., President-elect of the Michigan State Medical Society, for the illuminated scroll presented by the State Society to the President of the American Association of Industrial Physicians and Surgeons.

Considerable credit for the success of this initial meeting was due to the excellent arrangements made by co-chairmen Joseph L. Zemens, M.D.,

(Continued on Page 510)



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BIBLIOGRAPHY (1) Holbrook, W. P.: New York Med. (no. 7) 4:17, 1948. (2) Ragan, C., and Boots, R. H.: New York Med. (no. 7) 2:21, 1946. (3) Rawls, W. B.; Gruskin, B. J.; Ressa, A. A.; Dworzan, H. J.; and Schreiber, D.: Am. J. M. Sc. 207:528, 1944.

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Two Hundred Forty-six Attend Coller Testimonial Dinner



F. A. COLLER, M.D.

The testimonial dinner in honor of Frederick A. Coller, M.D., of Ann Arbor, President of the American College of Surgeons, on March 10, 1950, in Detroit was attended by 246 of his medical friends, associates and former students. President Coller, who is Professor of Surgery and chairman of the Department of Surgery in the Medical School of the University of Michigan, was feted at the Detroit Athletic Club. In addition to many words of praise from those present, hundreds of telegrams were received, many of which were read by the toastmaster, Grover C. Penberthy, M.D., Detroit, who acted as chairman of arrangements for the testimonial dinner.

Philip D. Wilson, M.D., New York City, Clinical Professor of Orthopedic Surgery, College of Physicians and Surgeons, Columbia University, presented a scientific address on "Osteoid Osteoma—An Intriguing Pathological Entity" as a fitting conclusion to a day dedicated to honoring one of Michigan's most illustrious medical men.

A sterling silver after-dinner coffee service was presented by those attending the dinner to Dr. Coller; in addition a scroll was presented to him by the Michigan State Medical Society reading:

"This token is presented by the Michigan State Medical Society to Frederick Amasa Coller, M.D., President, American College of Surgeons, 1949-50, in deep appreciation and grateful recognition of distinguished service rendered to Medicine, medical education and research."

The scroll was signed by W. E. Barstow, M.D., President, and L. Fernald Foster, M.D., Secretary.

A.A.I.P.S. PRESIDENT A. H. WHITTAKER, M.D., HONORED AT MICHIGAN'S FIRST INDUSTRIAL HEALTH DAY

(Continued from Page 508)

Detroit, President of the Michigan Association of Industrial Physicians and Surgeons, and Max R. Burnell, M.D., Detroit, chairman of the Industrial Health Committee of the Michigan State Medical Society. The members of the Committee on Arrangements and Program were: E. A. Irvin, M.D., Detroit, chairman; T. I. Boileau, M. D., Detroit, W. A. Dawson, M.D., Detroit, J. M. Lynch, M.D., Lansing and C. D. Selby, M.D., Ann Arbor.

President of the American Association of Industrial Physicians and Surgeons, Alfred H. Wittaker, M.D., Detroit, was the honored guest at the evening banquet in the Allenel Hotel which closed the all-day session. Dr. Whittaker received a beautiful gift from the members of the Michigan chapter of the Association, and C. E. Umphrey, M.D., Detroit, President-elect of the Michigan State Medical Society, presented him with an il-

luminated scroll on behalf of the State Medical Society.

Indicative of the laymen's interest in industrial medicine was the attendance of representatives of two Detroit daily newspapers who reported at length on the meeting. Outstanding clinical discussions were centered around the two panels which treated the problems of "Medical Problems of the Older Age Group in Industry" and "Ambulatory Surgery in Industry." Moderators for the panels were H. Marvin Pollard, M.D., and Carl E. Badgley, M.D., both of Ann Arbor.

Featured speaker at the evening banquet was John A. Schindler, M.D., Department of Internal Medicine, Monroe Clinic, Monroe, Wisconsin, who spoke on "Old Age—An American Problem." E. A. Irvin, M.D., Detroit, Vice President of the American Association of Industrial Physicians and Surgeons, presided as toastmaster.

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HIGHLIGHTS OF EXECUTIVE COMMITTEE OF THE COUNCIL

Meeting of March 10, 1950

- Monthly financial reports, including detailed breakdown of the Public Education Account and of the Public Education Reserve Account—with comparisons to receipts and expenditures in the same month last year—were presented, studied, and approved. Bills payable for the current month were presented and approved.
- Treatment of burns. A special committee of The Council was appointed to study the matter of treatment of burns: Grover C. Penberthy, M.D., Detroit, chairman; R. H. Baker, M.D., Pontiac, H. M. Bishop, M.D., Saginaw, C. W. Colwell, M.D., Flint, and W. H. Steffenson, M.D., Grand Rapids.
- E. L. Henderson, M.D., who in September will be President of the American Medical Association, has accepted an invitation to attend the MSMS Annual Session, Book-Cadillac Hotel, Detroit, on the dates of Tuesday, September 19 (for final meeting of House of Delegates) and Wednesday, September 20 (for first day of Scientific Session), according to report given by the Secretary.
- Procedure for the MSMS Mediation Committee was discussed with Chairman W. Z. Rundles, M.D., Flint. The committee is being guided by forms and procedures developed by the MSMS Legal Counsel.
- J. N. Asline, M.D., Bay City, James Cole, M.D., Highland Park, and Leonard M. Gaydos, M.D., Detroit, were authorized to attend, as representatives of the Michigan State Medical Society, a school on "Treatment of Radiologic Burns" at Western Reserve University, Cleveland, the week of April 2.
- The report of Past President E. F. Sladek, M.D., re his attendance at meetings of the Associated States Postgraduate Committee, National Conference on Medical Service, and Annual Congress on Medical Education and Licensure, in Chicago in February, were received and approved.
- University of Michigan Medical School Centenary. Recognition of this event, in the year 1950, was authorized by the Executive Committee, both by special features in JMSMS and at the MSMS Annual Session in Detroit next September.
- Harry F. Becker, M.D., Battle Creek, chairman of the MSMS Committee on Emergency Medical Service, was authorized to be the MSMS representative at the meeting of the Council on National Emergency Medical Service of the AMA in Chicago, April 22.
- The appointment of J. A. Cowan, M.D., Lansing, to the MSMS Venereal Disease Control Committee and of John E. Manning, M.D., Saginaw, to the Public Relations Committee, as made by President W. E. Barstow, M.D., were confirmed by the Executive Committee.
- The monthly reports of the President, the President-Elect, the Secretary, The Editor, and the Legal Counsel were presented and approved.
- Committee reports were presented from the Commission on Healing Arts (meeting of March 7); Maternal Health Committee (meeting of February 7). The Cancer Control Committee's budget for the year 1950 was presented and approved.

HEALTH PERSONNEL FOR OVERSEAS

To meet the increasing demand for experienced health personnel to staff technical health missions overseas which have been authorized by Congress, the Division of International Health, Public Health Service, is developing an intensive recruiting program.

Opportunities for overseas assignments in the higher grades are expected to develop for a number of physicians, scientists, health educators, sanitary engineers, sanitarians, nurses, administrators, and technicians. Some of the projects will involve employment by the Public Health Service and some will involve employment by the World Health Organization.

Members of technical health missions can assist foreign governments in establishing public health training, initiate health demonstrations, supervise specific projects, and serve in an advisory capacity to foreign government officials on health matters.

The various overseas health missions of the United States have been authorized by Congress with a view to strengthening mutual understanding between the people of the United States and the people of other countries.

(Continued on Page 514)

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From the Laboratory of the J. F. HARTZ Company, Detroit

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HEALTH PERSONNEL FOR OVERSEAS

(Continued from Page 512)

Such missions offer a challenge to American health experts to co-operate with the other people of the world in the development of human resources, as well as an opportunity to broaden their own medical and personal horizons.

Recruitment will be limited to highly qualified personnel possessing both expert knowledge in their technical specialties and the ability to inspire co-operation in a constructive program directed toward broad improvements in public health and the general advancement of human relationships.

Assignment will be made in the higher grades. Additional compensation will be provided in the form of allowances for overseas service.

Qualified health personnel may obtain application forms and further details concerning opportunities to participate in these programs by writing to the Chief, Division of International Health, Public Health Service, Federal Security Agency, Washington 25, D. C.

SURVEY OF PHYSICIANS' INCOMES

Late in April, the Bureau of Medical Economic Research of the American Medical Association and the Office of Business Economics of the U. S. Department of Commerce jointly conducted a survey of physicians' incomes.

The Bureau was authorized by the AMA Board of Trustees to co-operate in this survey, which the Department of Commerce had planned to conduct alone. This is the first full-scale survey by the department of physicians' incomes since 1941.

An analysis of the results will be published by the Department of Commerce next fall in its monthly publication, *Survey of Current Business*. Its August, 1949, and January, 1950, issues had published similar analyses of surveys of incomes of dentists and lawyers, respectively, made jointly with American Dental Association and the American Bar Association.

There is evidence that the national averages in some surveys have been too high because physicians who do not have bookkeepers to fill out questionnaires do not reply in sufficient numbers. Accordingly, the Bureau emphasizes the importance of all doctors, especially those with a relatively small practice, filling out the questionnaires.

Accurate postwar data on physicians' incomes is badly needed in order to develop better estimates of how much the American people pay to physicians.

Every physician can be assured that the survey has no relation whatever to the operations of the U. S. Bureau of Internal Revenue. There is no way by which the Department of Commerce could have obtained the needed information from the Bureau of Internal Revenue; hence, the questionnaire survey.

There are two questionnaire forms. The Bureau of Medical Economic Research helped to design these. The short form requests income data for 1949 only. The long form questionnaire covers the years 1945 through

1949. All are to be returned unsigned in franked envelopes.*

The punch card files of the Bureau of Medical Economic Research contain the names of about 200,000 physicians. The survey covers 125,000 of these, or 62.5 per cent of the total. Selection was made by a formula which eliminates any partiality.

A short form was sent once only to *every other* name in the file. Of the remaining 100,000 names, every fourth was selected. To these went 10,000 short forms and 15,000 long forms, with this distinction—the return franked envelopes carry a code number which identifies the physician to the Bureau of Medical Economic Research alone. All of the addressing was done in the headquarters of the AMA.

The sole purpose of the code number is to enable the Bureau of Medical Economic Research to address a follow-up letter to those not replying to the first request. Physicians need have no suspicion about the code number because when the reply is received, the questionnaire will be separated immediately from the envelope and the identity will be lost.

Physicians will be doing the medical profession a service by filling out the forms and returning them as soon as possible.

NATIONAL INSURANCE

National insurance is \$220,000,000,000. The net gain has been 20 billions. Let us listen to the socializers and divide this net gain. It would mean less than \$150 for every man, woman and child. Shall we sell our country into socialism for less than \$150.00?

NAM OPPOSES DISABILITY CLAUSE

The National Association of Manufacturers and United Auto Workers (CIO) are in sharp conflict on many points of the social security bill, but agree on one basic issue: Both believe benefits should be extended to every worker who can constitutionally be brought under the act.

Appearing before the Senate Finance Committee, Ira Mosher made the case for NAM and Walter Reuther, president of UAW, stated the union's views. Mr. Mosher's thesis was that benefits constantly should be regarded as a "basic minimum layer of protection," and that workers should be encouraged in every way to save and to participate in private pension systems. He said NAM believes the payroll tax should not be increased, and that deductions should stop with the first \$3,000 of annual income, as at present.

On permanent and total disability, Mr. Mosher said: ". . . we believe it to be extremely unwise to carry on that kind of a program on a Federal basis . . . Since in some cases the sole basis for determination of disability is a subjective one, it is easy to envision the many abuses that are bound to result." He also emphasized the "tremendous" cost, estimated at one billion dollars a year within 15 years. Mr. Reuther claimed that administration of a permanent and total disability program was feasible, citing as evidence the testimony of the

(Continued on Page 516)

The Protein-Rich Breakfast and Morning Stamina

Extensive studies* by the Bureau of Human Nutrition have established that breakfasts rich in protein and supplying 500 to 700 calories, effectively promote a sense of well-being, ward off fatigue, and sustain blood sugar levels at normal values for the entire morning postbreakfast period.

These physiologic advantages are related mainly to the protein content rather than to the caloric content of the breakfast. In fact, when isocaloric breakfasts were compared, those with the higher amounts of protein led to the greatest beneficial effects. Breakfasts providing the lower quantities of protein (7 Gm., 9 Gm., 16 Gm., and 17 Gm. respectively) produced a rapid rise in the blood sugar level and a return to normal during the next three hours. Breakfasts providing more protein (22 Gm. and 25 Gm. respectively) produced a maximal blood sugar rise which was lower than that following the breakfasts of lower protein content, but the return to normal was delayed beyond the three hour period.

The subjects on the higher protein breakfasts "reported a prolonged sense of well-being and satisfaction." The findings indicated that the beneficial effects of the high protein breakfast on the blood sugar level may extend into the afternoon.

Meat, man's preferred protein food, is a particularly desirable means of increasing the protein contribution of breakfast. The many breakfast meats available are not only temptingly delicious and add measurably to the gustatory appeal and variety of the morning meal, but they also provide biologically complete protein, B-complex vitamins, and essential minerals. *Meat for breakfast, a time-honored American custom, is sound nutritional practice.*

*Orent-Keiles, E., and Hallman, L. F.: The Breakfast Meal in Relation to Blood-Sugar Values, Circular No. 827, United States Department of Agriculture, Bureau of Human Nutrition and Home Economics, Agricultural Research Administration, Dec., 1949.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.



American Meat Institute
Main Office, Chicago...Members Throughout the United States

NAM OPPOSES DISABILITY CLAUSE

(Continued from Page 514)

social security administrator, Arthur J. Altmeyer, and the conclusions of the Advisory Council on Social Security. He described as a "pessimistic prophecy" the criticism that the program would encourage malingering by patients, but he did not offer specific evidence on this point. Mr. Reuther would go beyond the present bill and establish a program for temporary disability with benefits of \$30 and \$45 per week.

OUR ECONOMY?

Let's quit calling ours a capitalistic system. Let us call it a profit and loss system. There is nothing wrong with it. The only countries that can closely approach us are ones who have adopted our system of enterprise and incentive, or are proceeding on money and men they have "borrowed" from us.

WHAT OTHERS ARE SAYING

"How is the National Health Service working out?" is one of the first questions a foreigner will put to a British doctor. The usual answer is "It is far too early to say." In any case the British doctor is so deeply emersed in it, and incidentally so over-worked, that he is little inclined to concern himself with the generality of things; the particular overwhelmingly engrosses him. The extra number of the *Practitioner*, just published, has therefore, performed a timely service in attempting to review the "first year's working." This it does in a series of articles, the value of which is somewhat diminished by the fact that they are anonymous. This in itself is important. Men working in a "service" hesitate to put their names to anything in a nature of a criticism of it. The same tendency may be seen in the correspondence columns of this Journal. The real danger of a service in which men and women are employed by the State—or, at least, paid by the State—is that they will tamely acquiesce in things that they dislike, or hesitate to put their names to forthright criticism. This may lead, in Medicine, to a sapping of that essential of democracy—free discussion. The editor of the *Practitioner* considers that anonymity is essential "when the chief concern is that writers should speak their mind with complete freedom, uninfluenced by the desire to please their friends or placate their enemies, to escape the labels of 'traitor' or 'reactionary,' and when, as in several instances in this number, the article is a symposium embodying the views of several men." It is a sad and sorry comment on Medicine today to admit that only under the cloak of anonymity it is possible to speak the mind with the complete freedom on what the same editorial describes as "one of the greatest ventures in the history of medicine."—Editorial, *British Medical Journal*, October 1, 1949, entitled, "A Year of N.H.S."

TAX FACTS

Taxes are high—we know that—but it is a bit shocking to discover just how high they are. In 1945, in the midst of a global war with 11 million men under arms, the Nation's total tax bill—Federal, State, and Local—

was some \$52,500,000,000. In 1949, the revenue's take was up to some \$55 billion, more than the entire national income in 1932, 1933, or 1934, and some 25 per cent of the entire national income. The U. S. budget which was about \$3 billion in 1929, has arisen to \$43,500,000,000. In 1949, the Federal Government spent an amount equal to the incomes of all persons west of the Mississippi River.

Hidden Taxes

One of the things on which most of us are not so clear is the source of government tax income. Because only half of the Federal revenue and less than 10 per cent of state and local revenue is derived from the direct taxation of personal income, the hidden tax burden on nine out of every ten taxpayers—those with incomes of \$5,000 or less—is heavier than the income tax. The Tax Foundation, student of government expenditures and taxes, has discovered at least 100 taxes on a dozen eggs, 116 on a man's suit of clothes, 150 on the manufacture and sale of a woman's hat, and 151 on a loaf of bread. Every pack of cigarettes carries an 11½ cents tax burden; every \$2,000 automobile a load of \$300 to \$500.

Why High Taxes?

The present tax burden is necessitated by big government and the bureaucracy which it supports. The Federal Government presently occupies floor space equal to 170 Empire State Buildings 102 stories tall, and employs more than 2,000,000 persons on its payroll. An area equivalent to 6 Pentagon Buildings is required merely to store its records.

That this big, sprawling government is inefficient has been vividly and undeniably highlighted by the recent Hoover Commission report. To buy onions the Army puts an order through 288 separate steps; messengers handle the order some 110 times. The Veterans Administration Insurance Service has a work load of 450 policies per employe while the work load of the private insurance company is 1,762 policies—four times as heavy. The Army has been able to locate only 16,000 of 25,000 tanks theoretically on hand at the end of the war. Eighty-three out of every hundred veterans admitted to government hospitals are suffering from non-service connected ailments. It takes Army personnel some 16.1 days to recover from a tonsillectomy, while the average stay in a private hospital is 1.4 days. Our State Department takes as many as 35 steps to process a letter. —*Bulletin, American College of Radiology*, February, 1950.

PROPOSED CIO POLICY STATEMENT
ON VOLUNTARY PREPAID MEDICAL PLANS

Pending the establishment of an adequate national health program it is necessary for Labor to utilize various types of voluntary prepaid medical plans, including commercial insurance and medical-society-sponsored Blue Shield plans. Most of these voluntary plans are unsatisfactory because of limited scope of services available, high operating costs, limited or no public or labor representation on policy boards, restrictive protection (because benefits are cash indemnity rather than a

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AUREOMYCIN HYDROCHLORIDE LEDERLE *in Rickettsial Infections*



The discovery of aureomycin marked an epoch in antibiotic specific therapy. The rickettsiae, lying midway between the bacterial and the viral infections are immediately inhibited or killed by this antibiotic. Rocky Mountain spotted fever, Q fever and typhus fever all respond dramatically to aureomycin, without reference to the stage of the disease at which therapy is begun. The ability of this agent to penetrate the cell membranes and attack the intracellular rickettsiae is an important factor in producing its highly specific effect.

AUREO- MYCIN

Aureomycin has also been found effective for the control of the following infections: African tick-bite fever, acute amebiasis, bacterial and virus-like infections of the eye, bacteroides septicemia, boutonneuse fever, acute brucellosis, Gram-positive infections (including those caused by streptococci, staphylococci, and pneumococci), Gram-negative infections (including those caused by the coli-aerogenes group), granuloma inguinale, *H. influenzae* infections, lymphogranuloma venereum, peritonitis, primary atypical pneumonia, psittacosis (parrot fever), Q fever, rickettsialpox, Rocky Mountain spotted fever, subacute bacterial endocarditis resistant to penicillin, tularemia and typhus.

Capsules: Bottles of 25, 50 mg. each capsule.
Bottles of 16, 250 mg. each capsule.
Ophthalmic: Vials of 25 mg. with droppers
solution prepared by
adding 5 cc. of distilled water.

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AMERICAN CYANAMID COMPANY

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YOU AND YOUR BUSINESS

CIO POLICY STATEMENT

(Continued from Page 516)

guarantee of necessary medical service), prohibitions against group practice, and lack of provision for strengthening quality of medical services.

It is, therefore, the policy of CIO that voluntary prepaid medical plans should meet the following standards as a condition for utilization by organized Labor:

1. Prepaid medical plans should assure that services needed by the worker or his family will be provided in accordance with medical needs and not on a cash indemnity basis. Payments under the plan must be accepted by physicians as full payment for services rendered. This requires acceptance by groups of physicians of fee schedules for full payment of their services which should not be more than the amounts usually paid by such governmental agencies as Veterans Administration.
2. Labor and other consumer groups must be adequately and effectively represented on the policy making boards of prepaid medical care plans.
3. These plans must maintain minimum operating expenses and follow efficient administrative practices.
4. The plans must assure free choice of physicians or of groups of physicians who are associated in prepaid group medical practice.
5. The plans must provide for enforcement of high standards of care and continuous improvement of quality of care.

Published to give our members a forecast of Labor's demands in considering medical prepayment plans.

BLUE SHIELD

There are now sixty-eight "Doctors' Plans" which offer the public non-profit prepaid medical care protection against the cost of medical care. The coverage of these plans includes practically the entire United States.

A national association of these plans, incorporated under the laws of Illinois, has functioned during the past five years under the title "Associated Medical Care Plans, Inc." At the recent meeting of the Association at Montreal the attorney of the organization was instructed to amend the charter changing the title to "Blue Shield Medical Care Plans, Inc." Thus, on the national level,

Blue Shield becomes the symbol of non-profit medical coverage, just as Blue Cross stands for hospital service.

A "Blue Shield Commission" consisting of members representing the various districts of our nation, functions much as the Comitia Minora of a County Medical Society or a Council of a State Medical Society. The Commission carries on the business of the Association between the meetings of the national assembly or representatives of the 68 plans.

To meet the needs of employers and others who have employees located in more than one local plan area, a stock company is being incorporated. It will be operated upon a non-profit basis, and it will supplement, not compete with, local plans. The Blue Cross Commission has organized a similar company to serve the needs of the Blue Cross Association. Provision for the joint operation of the two companies is in process of preparation.

Blue Shield and Blue Cross offer the people of America a voluntary way of spreading the cost of doctor and hospital service. A system free of the excessive costs and wastes of bureaucracy and free of the controls which restrain personal liberty under the "compulsory system" of foreign lands. This American way is rapidly demonstrating that it is the practical way—the choice of a people who want to remain free.—U.M.S. Bulletin, March, 1950.

DEFINITIONS

Most of us are familiar with the cow story. It has recently been brought up to date.

CAPITALISM: If you have two cows, you sell one and buy a bull.

SOCIALISM: If you have two cows, you give one of them to your neighbor.

COMMUNISM: If you have two cows, you give them to the government and the government gives you the milk.

FASCISM: If you have two cows, you keep the cows and give the milk to the government.

NEW DEAL: If you have two cows, you shoot one, milk the other, then pour the milk down the drain.

FAIR DEAL: If you have two cows, you let them starve so you can buy your milk in cans, thus making business better.



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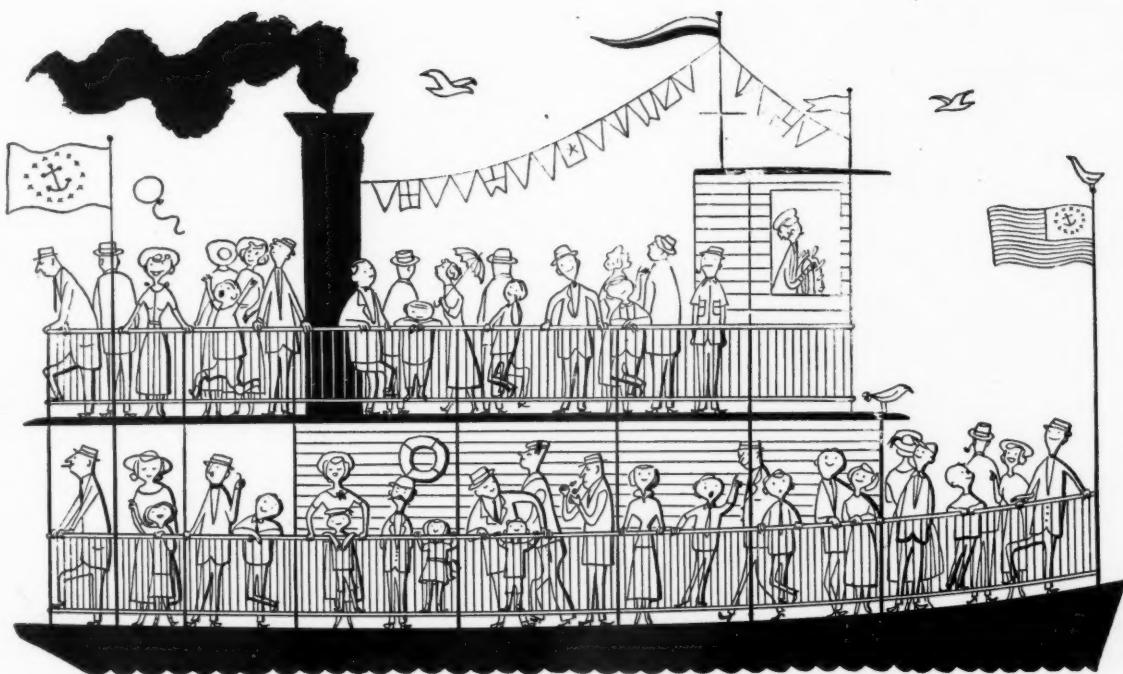
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Political Medicine

TRUMAN CERTAIN TO STUMP FOR NATIONAL HEALTH PLAN

Washington—One of President Truman's principal issues on his 15-state autumn campaign for Fair Deal Democratic congressmen will be his multibillion-dollar health insurance plan.

A great number of lawmakers are convinced that the present Congress will not act on the program despite Mr. Truman's urgent recommendation.

The President has said he will campaign for it.

"Not a chance for it in this session," says Rep. Mason (R., Ill.), a member of the Ways and Means Committee. He reflects what appears to be a majority sentiment of the members.

Mr. Truman and the Federal security administrator, Oscar R. Ewing, insist that their plan is "the democratic way." Since Ewing says not one objecting physician in 10 understands the Administration bill, here is an outline of what it would provide:

1. Prepaid health insurance, including medical, surgical, dental and hospital care and home nursing on a social-security basis similar to old-age pensions. Uninsured needy persons would be cared for through Federal and state appropriation.

2. Decentralized administration by the states, Federally financed, on plans passed by the legislatures. These would be subject to approval by a five-member national health insurance board. The board members would serve six-year terms at \$12,000 a year.

3. Federal financial aid to schools and universities teaching medicine, surgery dentistry and nursing on a large scale.

4. Federal subsidies for all forms of medical research, including hygiene and administration, expanded well beyond present financial aid.

5. Larger Federal appropriations for building hospitals, clinics and other needed facilities.

6. Grants to the states for scholarships, city and rural administration, health and hygiene services and preventive medicine.

7. Grants to states for childlife research and maternal aid.

What the program would cost is not set forth in the bill, which is sponsored by Democratic Senators Thomas, of Utah; Murray, of Montana; Pepper, of Florida; Chavez, of New Mexico; Taylor, of Idaho; and Humphrey, of Minnesota.

Estimates of the costs, however, run well into the billions.

Ewing believes that a payroll tax of 3 per cent—1½ per cent paid by employers and 1½ per cent by employes—on wages up to \$4,800 would be ample. He figures \$4,500,000,000 a year would be needed at the start.

"That would be no new burden on the economy," says Ewing. "It would be merely a different way of collecting and paying for better health."

Congressional critics say that Ewing's estimate would be only a drop in the bucket to what the system, if fully enacted, actually would call for.

Health insurance payroll taxes would be collected in addition to old-age pension payments which are 3 per cent now and scheduled to go to 4 per cent.

Insured persons would be eligible for benefits after about 18 months of payroll tax payments.

They would be assured full freedom in choice of doctors, dentists and nurses, who in turn could accept or reject patients after signing up under the plan.

Regulations to be worked out later would specify rates of payment to hospitals and professional people for their services.

In order to encourage a large increase in the number of doctors, dentists and nurses, schools providing those degrees or courses would be subsidized by the Treasury.

They would get from \$150 to \$350 for each student enrolled up to their annual average, and from \$800 to \$2,400 for each student enrolled over that average, depending on the courses taken.

—Signed article by PAUL B. LEACH displayed as streamer across the top of a page of the *Detroit Free Press*, Sunday, February 26, 1950.

H. J. RES.403 ALASKAN WELFARE PROGRAMS

Mr. Bartlett, of Alaska, January 24, introduced a bill to authorize special emergency assistance for welfare programs for Alaska, and for other purposes. This was referred to the Committee on Public Lands.

Comment: This would appropriate such funds as may be necessary for five years to extend, improve, and develop maternal and child services, crippled children's services, and child welfare services in Alaska through grants, in addition to those allotted under the Social Security Act, without financial participation by Alaska. Would also provide funds for assistance to needy persons, including cash payments, medical care, and transportation; and further funds for vocational rehabilitation services to disabled Alaskans; and that all such programs would be administered by the Social Security Administrator.

S.2978 MEDICAL CARE FOR GOVERNMENT EMPLOYEES

Mr. Langer, of North Dakota, February 2, introduced a bill to make available medical and hospital treatment to certain individuals who have had a minimum of ten years' service as civil officers or employes of the Federal

(Continued on Page 524)

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Michigan Postgraduate Clinical Institute

The registration at the 1950 Institute in Detroit totaled 1,875. The break-down follows:

Doctors of Medicine	1,402
Exhibitors	219
Guests	254
Total	1,875

This total represents an increase of 248 over the registration of 1949.

At the first Annual Michigan Heart Day held on Saturday, March 11, at the Book-Cadillac Hotel, Detroit, three hundred seven physicians were registered. This expression of interest insures a continuation of the Heart Day by its sponsor, the Michigan Heart Association.

Out-of-Michigan doctors of medicine who registered included physicians from Connecticut, Illinois, Indiana, New York, Ohio, Ontario, and Quebec.

A total of over 32,000 lines of publicity appeared in Detroit and Michigan newspapers in connection with the 1950 Michigan Postgraduate Clinical Institute.

Registration of Doctors of Medicine from Out of Michigan

Connecticut—Chester Phillipson, New Haven.

Illinois—P. R. Hawley, Chicago; A. J. Kappert, Evanston.

Indiana—J. A. Alford, Hamilton; H. H. Ash, West Lafayette; J. C. Baumgartner, Fort Wayne; F. A. Brydn, Fort Wayne; J. E. Burks, Crawfordsville; J. J. Hartman, Angola; D. G. Mason, Angola; F. L. Schoen, Fort Wayne; T. G. Sheller, Argos.

New York—F. J. Lewy, New York; H. W. Meyer, New York; G. M. Wheatley, New York; J. S. Wolff, Jr., Corning.

Ohio—D. R. Barr, Grand Rapids; J. D. Cameron, Defiance; B. B. Caplan, Columbus; I. R. Cohn, Toledo; H. D. Cook, Toledo; L. M. Dolloway, Toledo; H. F. Drygas, Oberlin; F. M. Flock, Windsor; J. E. Gorman, Windsor; F. C. Henry, Berlin Heights; W. G. Henry, Toledo; H. B. Lehner, Toledo; H. G. Lehrer, Sandusky; E. R. Murbach, Archbold; B. D. Osborn, Waldo; A. B. Price, Cleveland; B. H. Schulak, Toledo; R. F. Schultz, Kenton; E. J. Singer, Toledo; P. N. Squire, Sandusky; Gerald Stark, Toledo; O. H. Stonne, Toledo; R. B. Walker, Toledo.

Ontario—G. T. Bailey, Walkerville; M. N. Beck, Windsor; C. G. Campbell, Windsor; S. H. Campbell, Windsor; J. L. Cohen, Windsor; P. G. Crozier, Windsor; H. R. Hamilton, Chatham; J. I. Humphries, Windsor; J. Ketchum, Harrow; L. H. Killorn, Windsor; S. W. Leslie, Toronto; W. H. McKibbon, Wingham; D. G. McMullen, Essex; M. E. Nesseth, Windsor; F. G. Palanek, Chatham; F. T. Reid, Chatham; James Reid, Leamington; A. L. Story, Blenheim; H. G. Stratton, Windsor; Alan Taylor, Windsor; A. T. Wachna, Windsor.

Quebec—George Saine, Sherbrooke.

What They Thought of the 1950 Michigan Postgraduate Clinical Institute

Walter C. Alvarez, M.D., Rochester, Minnesota (Guest Essayist): "Thank you for your many kindnesses. I enjoyed my stay in Detroit and the fine audience."

W. L. Benedict, M.D., Rochester, Minnesota (Guest Essayist): "It was a pleasure for me to be permitted to participate in the program of the Michigan Postgraduate Clinical Institute in Detroit last week, and I was rather flattered at the large attendance. I was unable to spend as much time at the meeting as I originally had planned because some urgent matters made it necessary for me to return immediately after my paper had been delivered. I have had considerable experience with meetings such as yours, and I can tell you truthfully that I think you have one of the best-managed and most useful post-graduate clinical programs that has come to my attention. I know that your future meetings will be even more successful."

Bayard Carter, M.D., Durham, North Carolina (Guest Essayist): "This note is to thank you for allowing me to take part in a stimulating meeting. I enjoyed all of it. With appreciation."

William K. Diehl, M.D., Baltimore, Maryland (Guest Essayist): "I wish to take this opportunity to thank you and the Michigan Society for your hospitality during my stay at the Postgraduate Institute. I enjoyed the meetings very much and derived a great deal of pleasure from the privilege of being a participant in the panel discussion on cancer. Thank you again, and with kindest regards."

Richard H. Freyberg, M.D., New York City (Guest Essayist): "I enjoyed this meeting very much. It was like home-coming for me. I particularly appreciated the hospitality shown me. Dr. Sol Meyers was very attentive. He had a nice luncheon for me Friday noon and of course I greatly appreciated the testimonial dinner for Dr. Coller whom I have always admired. I wish the Institute continued success. Best personal regards."

J. Mason Hundley, Jr., M.D., Baltimore, Maryland (Guest Essayist): "I wish to thank you for your many kindnesses shown me at the recent Michigan Postgraduate Clinical Institute. When I went to pay my hotel bill I found it had been taken care of, for which I am most appreciative. Also thank you for the delicious fruit which came up to my room and which we enjoyed. I presume you were the one that arranged this. It was a great pleasure to meet with you and Dr. Diehl and I enjoyed our stay there very much."

F. E. Senear, M.D., Chicago, Illinois (Guest Essayist): "I thank you for your letter which reached me this morning. As is usual with any meeting of the Michigan State Medical Society, the arrangements were perfect and I enjoyed the opportunity of being one of the guest speakers."

(Continued on Page 524)

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- DON'T INHALE. Just take a puff and
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**Proc. Soc. Exp. Biol. and Med.*, 1934, 32, 241-245; *N. Y. State Journ. Med.*, Vol. 35, 6-1-25, No. 11, 590-592; *Laryngoscope*, Feb. 1935, Vol. XLV, No. 2, 149-154; *Laryngoscope*, 1937, Vol. XLVII, No. 1, 58-60



MICHIGAN POSTGRADUATE CLINICAL INSTITUTE

WHAT THEY THOUGHT

(Continued from Page 522)

Isadore Snapper, M.D., New York City (Guest Essayist): "I had a very pleasant time in Detroit and was very much honored in the way that I was received."

J. E. Burks, M.D., Crawfordsville, Ind. (Guest): "I feel my attendance at the recent Michigan Postgraduate Clinical Institute was indeed very worthwhile time spent. I want to commend the Institute on its choice of speakers, diversity of subject, and efficient presentation. The point that impressed me was the ability to present a great many facts in a twenty- and thirty-minute period of time. I plan very definitely to attend next March 14, 15, and 16, 1951."

P. G. Crozier, M.D., Windsor, Ontario, Canada (Guest): "I am a graduate of the University of Western Ontario Medical School, and I was especially interested to note how closely the pattern of our own Conferences follows that of the Michigan Postgraduate Clinical Institute. This may not be altogether a coincidence, as the professional staff no doubt combined the better features of many similar conferences, including your own and those of other leading American Institutes. I was pleased with the care given to details such as excellent amplification in the lecture hall, the co-ordination of the projection operator and speaker, and the honest attempt at maintaining a schedule. I feel your lecture topics were well chosen, and most speakers were impressive. I would be happy to receive an invitation to your future conferences, and I would make every effort to attend. Thanking you for your Southern Hospitality."

S. W. Leslie, M.D., Toronto, Ontario, Canada (Guest): "I wish to express my sincerest thanks and appreciation for permitting me to attend the clinics. I might say, for publication if you wish, that I have been attending many postgraduate clinics in the past number of years which are being given annually in the States, but I have yet to attend one which can surpass the programme content, the authoritative papers, and the fine technical exhibits of the 1950 M.P.C.I. I will certainly avail myself of the invitation to attend in 1951."

H. Allison, Miller, M.D., Marion, Indiana (Guest): "I want to state that I very much enjoyed my attendance at the recent Michigan Postgraduate Clinical Institute in Detroit. It was a very instructive meeting, well planned and well executed. Your group is to be highly

commended for the efforts made to bring to us so instructive a meeting. I am already looking forward to attending the next meeting March 14 to 16, 1951."

POLITICAL MEDICINE

MEDICAL CARE FOR GOVERNMENT EMPLOYEES

(Continued from Page 520)

Government. This was referred to the Committee on Labor and Public Welfare

Comment: This would authorize Federal Security Administrator, within the limits of existing Public Health Service facilities, to furnish to any civilian officer or employee of the Federal Government who has had a minimum of ten years' service and who is in need of hospitalization but is unable to defray the necessary expenses thereof, medical and hospital treatment for disability, disease, and injury, irrespective of whether such condition was sustained during the course of employment. The Federal Security Administrator would supply an application form which when executed would be accepted as sufficient evidence of inability to defray necessary expenses.

OLD AGE SECURITY

*It is easy enough to promise every man or woman over sixty-five a monthly payment of \$100, but each worker will be interested in how much \$100 each month from Uncle Sam will actually buy. That is something the average man can understand because he already has had a large dose of it in the loss of purchasing power of his prewar savings. What is the farmers' present suspicion of the Brannan Plan millennium if not an expression of distrust in being promised too much? The farmer is afraid that, if he is to receive too much, he may end up with nothing. That is the type of language the worker, too, can understand. As long as the Fair Deal spokesmen can get away with the argument that the opposition is "against the Welfare State" because it leads away from the old laissez-faire days, they hold the winning hand. This is the type of controversy that must be argued out not on the basis of political principles but in terms of hard cash and common sense.—(Editorial, *The Journal of Commerce*, Dec. 5, 1949)*



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Dryco's special drying process makes it more easily digested by certain infants than the fresh milk from which it is made. It supplies more minerals, particularly more calcium, than a corresponding formula of whole milk, plus 2500 U.S.P. units of vitamin A and 400 U.S.P. units of vitamin D per reconstituted quart. Only vitamin C need be added. Each tablespoonful supplies 31½ calories. Readily reconstituted in cold or warm water.

Available at pharmacies in 1 and 2½ lb. cans.

*Pitt, C.K.: *The Art and Science of Artificial Infant Feeding*, J.M. Asso. Ala. 19:101 (Oct.) 1949.

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Cancer Comment

CRITERIA FOR DIAGNOSTIC CANCER TESTS

In the journal *Cancer*, for January, 1950, F. Homberger* presents a critical evaluation of some sixty diagnostic tests for cancer based largely on biochemical reactions in body fluids and tissues. Without attempting to summarize this informative paper, it may be of value to quote the criteria that should govern the use and interpretation of such tests in this important medical field.

Criteria for a Test

"The ideal diagnostic test for any disease is one that allows discovery of the disease in its latent, asymptomatic stages. In order to be of practical value, such tests have to be technically simple. The procedures have to be reproducible. The specificity of the test should be as high as possible. Positive findings should be limited to cancer only or possibly to a few other conditions that could be ruled out easily by other diagnostic means. There should be no false-negative tests, an especially important point. Any procedure that would occasionally give a negative result in the presence of cancer would be most dangerous. On the other hand, considerable technical difficulties would arise if false-positive findings were often obtained with a given procedure. The economic problems of differential diagnosis in a great many individuals who, while actually healthy, might have positive 'tests' would be serious, not to speak of the mental anguish caused by such falsely 'positive' findings.

"The sensitivity of the procedure would have to be high. The earlier it could detect cancer, the better. The end point should be sharp, i.e., no 'doubtful' reactions should occur. These are severe requirements for any clinical test. They are fulfilled largely by the known serological and immunological procedures, as well as by diagnostic procedures for certain metabolic diseases, such as diabetes and disorders of calcium metabolism. They represent an ideal that has to be approached as closely as possible.

Evaluation of a Test

"Before any procedure is tested on patients to determine its clinical value, it is necessary to study its reproducibility and to investigate its technical soundness. For procedures that are based on conventional biochemical, immunological, or other techniques, this can be done by a simple study of the method as described by its originator. One will, however, be faced with procedures that are new and unorthodox. In such cases, the method has to be studied step by step by personnel familiar with its technicalities or with the originator, who has to demonstrate all methodological details. The reproducibility of the method is important and should be

*Homberger, F.: *Cancer*, 3:145, (Jan.) 1950.

checked on a number of specimens from the same patient, as well as on a number of subfractions of one and the same sample. If biological systems are employed, the strict control of all conditions is essential.

"In cases in which a biochemical characteristic of blood, urine, etc., is claimed to be diagnostic for cancer but is known already to be unstable or subject to great variations under the conditions proposed for the test, the mere demonstration of such variability should suffice for its rejection.

Clinical Evaluation

"Those techniques that can stand such scrutiny as just outlined may be considered for clinical evaluation.

"There are two phases to the clinical evaluation:

"1. The first step seems to be the elimination of any test that is certainly not specific and has little chance of being of diagnostic value. It appears possible to do this first screening by studying the results of any proposed procedure in a sample group of patients with proved cancer. This sample should include various stages and types of the disease, and its size would have to be determined by statistical considerations. If a suggested procedure is claimed to be diagnostic for a given type of cancer only, the first sample will, of course, be limited to that type of disease. This initial step would demonstrate the ability of the procedure tested to detect cancer in those stages that are ascertainable by conventional diagnostic means. It may be assumed that tests that fail at this level would be even less successful in earlier stages of cancer. This first-stage screening presents the most favorable conditions by which any procedure can demonstrate its effectiveness as a diagnostic tool. If, with such favorable premises, the failure rate is significantly high, the procedure studied may be discarded as a diagnostic aid. If the rate of correct positive diagnoses is high, the procedure deserves further study.

"2. This additional evaluation has to be carried out on patients with cancer at increasingly early stages and not merely on control subjects who are well by general standards but on those who are afflicted with diseases that would present serious differential diagnostic difficulties in distinguishing them from cancer. Finally, patients suffering from other types of chronic debilitating disease should be tested.

"The sample groups in each instance should be sufficiently large to yield significant data.

"The final judgment of any diagnostic procedure will, of course, depend on the results obtained in the field over a prolonged period of time and on large numbers of patients."

• • •

Four out of five cancers of the head and neck are clinically obvious. One out of five is obscure.

• • •

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Editorial Comment

POLITICAL MEDICINE VS. FREE MEDICINE

The British ministry of health reports that the year ending March 31, 1949, was Britain's best year in terms of good health. It was the first year in which socialized medicine was operative in Britain.

The death rate in Britain was 10.8 in 1,000. The infant mortality rate was 34 in 1,000.

The United States, where medicine is a free profession, despite the efforts of the Truman administration to bring it under state control, had a death rate of 9.9 for each 1,000 population in 1948, the last year for which statistics are available. The infant mortality rate for 1948 was 32 in 1,000 babies in their first year of life. Our showing in both of these categories was better than Britain's.

Oscar Ewing, the federal security administrator, who is the chief administration proponent of political medicine, came back from England a few months ago praising British socialized medicine to the skies. If that system is better for everybody, why do the figures show the contrary?—*Chicago Tribune*, April 8, 1950.

ARE DOCTORS CITIZENS?

There has been plenty of evidence in recent years to suggest that some people in this country are not altogether certain of the answer to the question: are doctors citizens?

The astonishing demand from several political sources, that payment for doctors' services be made by Government paymasters, is compelling indication that some people think the doctor is different from other citizens, with a different sort of civic obligation and a different sort of individual rights.

No other professional man in America—no businessman, no butcher, no plumber, no baker, no clergyman, no grocer, so far as we know—has to date been nominated to share with the doctor the dubious distinction of having his income paid by Government and his product or service made "free" to all comers. It is conceivable such suggestions may come later. Certainly in the logic of socialism, a case could be argued for making the work of all these essential people a function of Government.

Perhaps some day such a case will be urged. We have an idea that when it is, it will split wide open on the plumber. There is a hard core of common sense in the American people and a blunt insistence on the individual freedom of every man.

There are a good many things American citizens won't stand still for—and don't expect other citi-

zens to stand still for either. Which brings us back to the question, "Are doctors citizens?"

We'll know more about the answer after next November. The coming Congressional elections will give the whole country a good yardstick with which to measure the citizenship of the medical profession.

Is it a citizenship that influences Government, a citizenship that is informed about candidates, a citizenship that means registration, voting, working for the candidate chosen?

Or is it negative and passive when faced with the vital issues of an urgent time? Is it too busy to be concerned with the public business of democratic Government?

The answer is up to every doctor. And the testing time will be the coming elections—the primaries as well as the final races in November.

This is the time for doctors to demonstrate in action what their citizenship means in America. Conceivably, it may be the last time.—Submitted by A.M.A.

MEDICINE AND POLITICS—1950

"Politics and medicine don't mix!"

Statements like this frequently are employed by many doctors to justify their failure to register, failure to vote and failure to take part in the political decisions of the local community, the State and the Nation.

Added to this viewpoint is the indisputable and somewhat extenuating fact that the best doctors are extremely busy people, engaged in the night-and-day task of preserving health and saving life.

Nevertheless, this year of decision, 1950, presents American doctors with an undeniable paradox: doctors either must enter the political arena or see politics enter medicine.

For this is not just another election year. It is a year in which medicine itself will be one of the big clay pigeons on the political shooting ranges. The question of Compulsory versus Voluntary Health Insurance—embodying the future not only of the medical profession but of all the American people—will be one of the principal issues in the 1950 Congressional elections.

It is imperative, therefore, that every doctor exercise his franchise this year—his right as an individual citizen to register, to vote, and to help influence the political direction of his Nation. Failure to do so, this year, may mean the ultimate termination of his traditional medical franchise—the right to practice medicine according to ethical professional and scientific standards—not political standards.—Submitted by A.M.A.

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Lesser Known Uses of Thyroid Substance

By Robert C. Moehlig, M.D.
Detroit, Michigan

WHILE THE USE of thyroid is well known for classical cases of congenital and acquired hypothyroidism, there are many occasions where it is useful in unrecognized manifestations of thyroid disturbance. I shall cite some of these conditions.

In some cases of *alopecia* which include loss of the eyebrows, eyelashes, axillary, pubic and body hair, the use of thyroid has proven beneficial. I have seen cases of this type accompanied by a degenerating type of goiter which has reduced the amount of normal thyroid secretion resulting in a minus metabolism. Giving thyroid in these cases may produce signs and symptoms of hyperthyroidism without however necessarily raising the metabolism to normal and without correcting the alopecia. These individuals must have the goiter removed and even without the use of thyroid substance the alopecia is corrected following the thyroidectomy.

It is not sufficiently stressed that a patient may have a goiter and still have a minus metabolism. This type of goiter, which is seen in cretinism in about two-thirds of the cases, is a degenerating type and fails to deliver a sufficient amount of thyroid secretion. The metabolic rate may be misleading and every individual should be examined for a goiter. It is important that the examiner place his thumb and index finger around the thyroid cartilage, and have the patient swallow.

From the Department of Medicine, Harper Hospital.
Presented before the Northern Tri-State Medical Society, April 12, 1949.

MAY, 1950

It is surprising the number of goiters that are overlooked because of a superficial neck examination. Too frequently the practitioner depends upon the basal metabolism apparatus to tell him whether a goiter is present or not. One should treat the patient and not the basal metabolic rate.

Another use of thyroid that is not too well known is in certain types of *vertigo* or *dizziness*. Hypothyroidism may show itself in the vestibular or balancing apparatus. This is frequently seen in congenital hypothyroidism as manifested by hearing defects; about 85 per cent of cretins have difficulty with hearing in greater or lesser degree. The peripheral hearing apparatus is defectively developed in cretins and it is not surprising that in adult hypothyroidism vertigo may be present. The dizziness may be so severe that a brain tumor may be suspected.

Scholz⁹ and others found that fully one-half of adult myxedematous patients have disturbances in hearing. Besides the hearing disturbance these patients complain of dizziness and they usually have a low metabolic rate. The correction of the dizziness by the administration of thyroid is gratifying.

I have a fairly large series of patients with a goiter and a low metabolic rate in whom the removal of the goiter was sufficient to correct the vertigo. In some patients after a few months thyroid substance may have to be given to correct the hypothyroidism. Barlow¹ of the Mayo Clinic as well as I⁶ have reported a series of cases benefited by thyroid therapy.

Those patients who have such conditions as otosclerosis and organic nerve deafness are not benefited by thyroid but in some cases of early nerve deafness thyroid is worthy of a trial. It is of interest that congenital goiters are related to defects in the peripheral hearing apparatus and

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may not show symptoms of nerve deafness until middle life.

That the thyroid gland and the nervous system are related is, of course, well known and there is a relationship between the auditory nerve and the thyroid. Sometimes in middle life the auditory nerve begins to degenerate, which shows itself clinically by ringing in the ears, dizziness, and finally, total deafness. The use of thyroid may help in the early stages.

Thyroid has been used for *chronic headaches* in which other causes have not been found. Some cases of true migraine have received benefit from thyroid. It is of interest how many patients have been relieved of their headaches by thyroid. One of the first symptoms of thyroid overdosage is headache. This seems paradoxical, for thyroid has been prescribed for headaches and, as stated, overdosage results in headache. How thyroid helps these individuals with chronic headache is not definitely known and there is no need to enter into speculative theories, suffice it to say that when other measures have failed in chronic headache, a trial of thyroid with a beginning dose of $\frac{1}{2}$ grain may be worth while.

In children with chronic headaches, particularly where there is a familial history of migraine, thyroid has been shown to be of great benefit. Improvement, if it is to follow, usually comes within three to four weeks after beginning therapy.

Since we are on the subject of chronic headaches, there is a remedy for migraine in women that has given me a great deal of satisfaction, and naturally the patients suffering from the condition are exceedingly grateful. This drug is methyl testosterone and was used in forty-four patients with only four failures. There are certain limitations to its use, in that large doses will produce masculinizing signs. However this drug has given remarkable results. The dosage was begun with 20 mg. daily and results were achieved within four to six weeks, and if it was not obtained within this time it was discontinued. Details of this will be published in the *JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY*.

Another place where thyroid therapy may be of benefit is in *recurring conjunctivitis*.

This is particularly true in mild hypothyroidism which may be unrecognized. Ophthalmologists have used iodides for years in an empiric way for chronic conjunctivitis. It is not surprising that thyroid is helpful in conjunctivitis since the con-

junctiva has the same embryological origin as the skin, and as we know, lack of thyroid produces a dry skin with inflammatory changes.

The same holds true for *corneal ulceration*, which may be stubborn but thyroid may actually cure the condition. Certainly thyroid is worthy of a trial in these cases, and while the antibiotics and sulfa drugs have given brilliant results, nevertheless in those cases not due to a bacterial cause thyroid has proven of great benefit in chronic ulceration of the cornea.

Another condition in which thyroid has been found to be of benefit is in the *chronic nasal cold*. I do not wish to give the impression that the usual type of nasal colds are helped by thyroid. However it has been shown by Bryant⁴ and myself⁷ that chronic nasal colds and susceptibility to coryza are relieved and prevented by thyroid. For instance, Bryant found that sixty-five children with recurrent head colds were benefited by thyroid. These had hypothyroidism. That this therapy has a physiological basis is shown by the fact that in congenital hypothyroidism there is chronic nasal catarrh and a defectively developed nasal epithelium.

That there is a close relationship between the thyroid and chronic nasal disturbances is also shown by the fact that iodine may produce rhinorrhea or a "running nose;" that is, the nasal epithelium is stimulated by iodine. The same is true of thyroid substance. It may also be stated that the saddle nose is not due to syphilis, but the cartilage of the nose does not develop, just as the rest of the skeletal cartilage fails to develop properly.

Thyroid has been found useful in individuals who complain of *dryness of the mouth* due to lack of salivary gland secretion. It is not too well known that the thyroid gland is necessary for the development of the salivary glands. In puppies the removal of the thyroid results in non-development of the salivary glands including the parotid gland. Naturally if this is so, then a lack of thyroid secretion would result in a lack of salivary gland stimulation and dryness of the mouth is the result. You are all familiar with the salivation induced by the iodide group of drugs as a result of salivary gland stimulation, and in some sensitive individuals, particularly those belonging to the hayfever, asthmatic allergic group, the administration of iodine will cause excessive swelling

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of all the salivary glands even with a small dose of the drug.

Thyroid has been successfully used in *recurrent swelling of the parotid gland*. I saw two cases in girls aged eight and nine years who had periodic swelling of the parotid gland associated with a colloid enlargement of the thyroid. The administration of thyroid gr. $\frac{1}{2}$ for a period of two months resulted in no recurrence of the parotid swelling. It is now over a year since swelling occurred. Previously the parotid swelling occurred every two to three months. The eight-year-old patient had this periodic parotid swelling since the age of nine months.

There is unquestionably a close relationship between the thyroid and the salivary glands. It is also of some interest that the dryness of the mouth seen in women at the menopause may be benefited by thyroid.

Thyroid has been used in certain *gastrointestinal disturbances*. In 1941 I⁵ reported thirty-two cases of which twenty-four (75 per cent) complained of periodic headaches associated with sour eructations, nausea, belching of gas and distress in various parts of the abdomen. That a close relationship existed between the headache and real migraine is shown by the fact that nineteen (59 per cent) had a familial history of migraine. The abdominal distress in some patients simulated peptic ulcer, the pain coming from one half to two hours after meals. Sour eructations, belching of gas and nausea were also outstanding symptoms.

Various forms of diet, including ulcer regimen, with alkalis, antispasmodics, vitamins and other forms of medication had been tried.

The basal metabolic rate ranged from zero to minus 23 per cent, the average being minus 15 per cent. The blood cholesterol was usually elevated as it is in migraine. I found that the average blood cholesterol in migraine was 225 mg. where the upper limit of normal was 200 mg. per 100 c.c. of blood.

Because of the history of headache and familial migraine in several patients, the elevated blood cholesterol and the low basal metabolic rate, small doses of thyroid, gr. $\frac{1}{2}$ to gr. $\frac{3}{4}$, were given in daily dosage. Improvement followed in a short time with disappearance of the headache and gastrointestinal symptoms. Bassler² also reported cases of marked hypothyroidism with abdominal symptoms consisting of abdominal pain simulating gastroduodenal ulcer, cholecystitis and appendicitis.

These cases were relieved by thyroid therapy. His patients presented low blood pressure, leukopenia and a low basal metabolic rate.

Gastroenterologists must see this condition more frequently than other specialists. That surgeons do is shown by the fact that a high percentage of these patients have had appendectomies.

Ramsey⁸ said that in myxedema the gastrointestinal symptoms are anorexia, flatulence especially after meals, constipation, occasional nausea and vomiting, gastric hypoacidity and achlorhydria and abdominal pains which may simulate gastroduodenal ulcer, cholecystitis and appendicitis.

Thyroid has a place in the *chronic constipation of hypothyroidism*. By stimulating the sympathetic nervous system it increases the tone of the intestinal musculature. Even in cases of Hirschsprung's disease or megacolon thyroid has been useful; one author³ goes so far as to say that the symptoms of congenital hypothyroidism and megacolon were so definite that it is believed that the proved pathologic changes of the two diseases justify the assumption that Hirschsprung's disease or megacolon is caused by congenital hypothyroidism in probably all cases and is therefore not a disease but a subsyndrome of hypothyroidism. Thyroid increases peristalsis in hypothyroidism and thus helps to overcome constipation. It has also been used in some cases where hypothyroidism does not exist but where increased sympathetic nervous stimulus is desired. One calls to mind in this connection the diarrhea that frequently accompanies hyperthyroidism. Here the central nervous system and the peripheral sympathetic nervous system are overstimulated.

Habitual Abortion.—One of the better known uses of thyroid is in habitual abortion. Some women are in a state close to sterility because of hypothyroidism. Should they become pregnant the development of the amnion and chorion is defective and abortion follows. It is in these cases that thyroid is worthy of trial. Of course there are certain features which may be recognized as due to hypothyroidism. Dry skin, brittle nails, muscular fatigue, mental dullness, myxedematous infiltration of the skin and some of the other hypothyroid signs including a low metabolic rate.

The administration of thyroid substance may enable the patient to become pregnant but if insufficient thyroid is given, then abortion may fol-

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low. At least $\frac{1}{2}$ to 1 grain of thyroid should be given daily, naturally with frequent check-ups.

It should be stressed that there are many women who have a goiter and who because of this are unable to become pregnant. These women do not show the signs or symptoms of a toxic goiter, but the presence of the goiter seems sufficient to make them sterile. If thyroid is given to these women there is a great possibility of making the goiter toxic.

The procedure that I have found to be best in these cases is to have the goiter removed, and it is surprising how many women are able to become pregnant following thyroidectomy even without the administration of thyroid. However, and I feel this is important for the sake of the child's future, thyroid should be given for this because it is the best way to prevent a goiter in the offspring. This should be done even if the mother has had a thyroidectomy, for the hereditary factor of goiter is transmitted and therefore thyroid should be administered to the mother. This should be given as soon as the mother knows she is pregnant, for the thyroid gland is laid down in the early weeks of embryo formation.

A half a grain of thyroid may or may not be sufficient; naturally the daily dosage must be guided by the signs, symptoms and metabolic rate. During the end of pregnancy around the seventh or eighth month the dosage may be reduced, for the metabolism becomes elevated during the latter months of pregnancy.

The administration of thyroid or iodine during pregnancy is one of the best ways of preventing a goiter in the offspring. Of course the patient must have frequent check-ups.

It must be stressed that thyroid administered during pregnancy is a two-edged sword; while the proper dose is one of the best ways of preventing a goiter in the offspring, nevertheless the prescribing of large doses such as 2 to 4 grains of thyroid to pregnant women may produce irreparable damage to the brain of the fetus, and while definite proof is still lacking, I have seen two cases of mongolism in infants whose mothers were given 5 and 10 grains of thyroid throughout pregnancy. I cannot help but feel that the thyroid relationship to the nervous system is such a close one that overdosage of thyroid substance may be responsible for the damage to the brain cells.

Small doses of thyroid such as $\frac{1}{2}$ to 1 grain are

safer, and even in this size of dose close supervision of the pregnant mother is absolutely necessary.

Still another important use of thyroid is in *stimulating the pituitary gland*. Since we have no potent extract from the pituitary gland itself the use of thyroid to stimulate the pituitary finds many uses. It is especially helpful in cases of amenorrhea, particularly those due to primary pituitary hypofunction. The administration of thyroid plus some form of estrogen, such as stilbestrol in one of its various forms or, as I prefer, the natural occurring estrogens derived from pregnant mare urine, is helpful in amenorrhea. In administering this combination it is helpful to remember that the thyroid may be given continuously in contrast to the estrogen in which it is necessary after three weeks to interrupt their administration to permit withdrawal bleeding. If no menstruation has taken place after a ten- to twelve-day period of waiting, then estrogen may again be given for three weeks. While I am on the subject of amenorrhea, it is well to state that in girls who have never menstruated priming of menstruation may be brought about by giving estrogens for twenty-one days or just fourteen days followed by two injections on successive days of estradiol or estrone, such as 25,000 units of theelin or its equivalent and in same syringe 12.5 units of progesterone, that is, one injection of these two substances combined on two successive days. Menstruation usually follows in four to seven days. This procedure may be repeated the next month and then a trial of oral estrogen for twenty-one days without giving the two injections. Today several firms supply the estrogen and progesterone combined in one ampoule. Some are doubling the amount, that is, 50,000 units of estradiol, the estrogen, and 25 units of progesterone, in one ampoule.

Thyroid in small doses such as $\frac{1}{4}$ grain or $\frac{1}{2}$ grain is also useful as a synergist to chorionic gonadotrophic hormone in cryptorchism.

Thyroid has been found beneficial where *diuresis* is desired. By speeding up the metabolism and probably by stimulating both anterior and posterior pituitary lobes which have to do with water metabolism, thyroid produces diuresis. Likewise the heat-regulating center, the hypothalamus is stimulated by the thyroid. This is shown by the fact that in a thyroid crisis or storm, the heat-regulating center is activated to such a degree of hyperthermia that death may result. The water metabolism is speeded up by thyroid therapy.

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It may be stated in passing that hibernating animals may be brought out of their hibernating state by the administration of thyroid or the injection of thyroxin.

By speeding up the metabolism some cases of *arthritis* are benefited by thyroid therapy. The joints become warmer and the pain lessens, but too large a dose such as $1\frac{1}{2}$ to 4 grains may produce such a stimulus to the nervous system that vasoconstriction may result and the arthritis is made worse by this dosage of thyroid.

In congenital *epiphysitis*, thyroid has been used. The so-called Perthe-Legges disease or osteochondritis deformans juvenilis may be helped by thyroid therapy. One-half to 1 grain over a period of months may be helpful, and in addition to this I give the male patients who are around the age of seven or eight years or older about twelve to fifteen injections of chorionic gonadotrophic hormone if cryptorchism is present. These boys are usually obese and have epiphysitis with loose ligamentous and supportive tissue structures.

Thyroid has found a place in some types of *anemia*. This is especially true of the hypochromic type of anemia associated with hypothyroidism. In congenital hypothyroidism the bone marrow is in a hypoplastic state and this is also true of the adult acquired type. It is of interest that the combination of thyroid and iron correct the anemia whereas the administration of thyroid or iron alone fails to overcome the anemia. Thyroid treatment has been found to render the differential white count normal by increasing the polymorphonuclear cells, a reaction which has been termed paradoxical, as in healthy persons thyroid substance induces a mononuclear increase. In outspoken cases of hypothyroidism anemia is seldom missing. The hemoglobin values diminish relatively greater than the red cells.

In this situation I cannot resist the temptation to state that in these cases of anemia resistant to both thyroid and iron and where no other case can be found, the use of testosterone by hypodermic in men has been of great benefit to overcome the anemia. Oral methyl testosterone has been of great service to women with anemia, but I cannot here go into details as to dosage. Suffice to repeat that it must be used with caution in women. However, it has a real physiological basis. It has been found to produce hyperplasia of the bone marrow.

Occasionally *mental depression* with melancholia has been helped by the administration of

thyroid in $\frac{1}{2}$ grain daily doses. Here too I have found methyl testosterone in women and testosterone propionate by hypodermic of greater benefit than thyroid.

From this you may draw the conclusion that my paper should have been on the use of testosterone instead of thyroid.

As you well know, the dermatologists in the early days disagreed on the diagnosis but all prescribed sulfur ointment; so also in the past, endocrinologists disagreed on the endocrine diagnosis but all agreed to give thyroid. Fortunately both specialities have made great advances since those days and thyroid still retains a major role in endocrine therapeutics.

Returning to the use of thyroid, there are two other conditions in which it has been useful: one is in *heart block* or Stoke-Adams syndrome. Thyroid has been used to prevent the attacks of heart block. This use of thyroid has been advocated by Dr. Paul White.¹⁰ He believes that the benefit is achieved by direct excitation of the ventricles.

The other condition in which thyroid has been found useful is in *angina pectoris*. This seems somewhat in contrast to the opinion that thyroidectomy reduces the metabolism and thus slows the work of the heart, and in this way lessening the attacks of angina. However, in true adult hypothyroidism with angina pectoris, the tone of the heart muscle is reduced and it is not an efficient pumping organ. It is in these cases of true hypothyroidism with angina pectoris that thyroid therapy may be of benefit. It must be stressed emphatically that the initial dosage must be small such as a half a grain daily and only gradually increased.

It should also be stated as a general rule that it requires approximately three weeks for the dose of thyroid to reach its maximum metabolic effect.

Having painted a rather rosy picture of thyroid therapy, it is well before concluding to list a few of the abuses to which thyroid administration has been put.

Perhaps one of the greatest abuses of thyroid therapy has been in obesity. For many years before thyroid required a prescription, patent medicines containing thyroid for reducing weight were sold by the millions. Reduction may be brought about but the price is the production of medicated hyperthyroidism. Of course, thyroid is indicated in those cases where actual hypothyroidism exists, but

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it must be emphasized that the ordinary type of obesity may show a low metabolic rate without actual hypothyroidism being present. Some patients I have known received large doses of thyroid, such as 10 to 15 grains per day and in one case 32 grains. I remember one physician who couldn't resist eating, and he developed marked obesity. He would gorge himself and then take a handful (and what a big hand he had) of thyroid pills to prevent a gain in weight. It wasn't too long after doing this that I was called in an emergency to his office where he was dying of myocardial infarction.

Symptoms of insomnia, tachycardia, excessive perspiration and nervousness with irritability, crying spells and at times precordial pain are the result of chronic medicated hyperthyroidism. Some physicians treat the basal metabolism of the obese patient and continue to increase the dose regardless of the symptoms.

Great harm may be done by prescribing thyroid over a period of many months or years to obese children. Thyroid, by stimulating the metabolism, also stimulates the appetite. You are aware of the fact that the hyperthyroid patient has, as a rule, a good appetite, being almost constantly hungry. As a matter of fact, obese patients are frequently made hyperthyroid by a reduction diet and thyroid therapy—this is particularly true if the patient is conscientiously following his reduction diet.

Returning to obese children for whom thyroid is prescribed over a period of many months, it should be realized that thyroid has the ability to produce a negative calcium balance, and that means more calcium is lost in the urine than is absorbed, with the result that there is a loss of lime from the spine and other parts of the skeleton. This results in osteoporosis or thinning and weakness of the skeletal system. Should this take place in these fat children, then curvature of the spine results and the damage may be irreparable. These fat children are all the more susceptible because the excess weight puts an undue strain on the supportive structures of the skeleton.

Regardless of whether we feel that the cause of obesity is endogenous or exogenous, it still requires dieting to correct it. In my opinion, individuals inherit a good appetite—probably an inherited appetite center, plus the fact that the way food is disposed of by the individual cells differs from the normal or thin individual.

As we know, the injection of an overdose of insulin produces hypoglycemia, which in turn stimulates the hunger center, and the individual eats to overcome it. If he does not do so, convulsions result, and these muscular contractions release sugar from the muscles and thus overcome the hypoglycemia.

Finally, let me conclude by warning not to give patients suffering from anxiety or psychoneurosis any thyroid, as they are made distinctly worse by it.

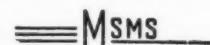
Summary

In this article thyroid substance was advocated for some conditions in which this drug was not too commonly used. Included in these conditions were some forms of alopecia, usually associated with a goiter of the degenerative type; vertigo, chronic headaches, recurring conjunctivitis, corneal ulceration, chronic nasal cold, dryness of the mouth associated with underactivity of the salivary glands; recurrent swelling of the parotid gland, certain gastrointestinal disturbances, chronic constipation, habitual abortion, to stimulate the pituitary gland, to induce diuresis, some cases of arthritis, congenital epiphysitis, some types of anemia, mental depression, heart block and angina pectoris.

There are of course limitations to its use. Emphasis was placed upon the abuse of thyroid in obesity. Overdosage may produce a negative calcium balance.

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And last, not least, in each perplexing case,
Learn the sweet magic of a cheerful face;
Not always smiling, but at least serene,
When grief and anguish cloud the anxious scene.
Each look, each movement, every word and tone,
Should tell your patient, you are all his own;
Not the mere worker, purchased to attend,
But the warm, ready, self-forgetting friend,
Whose genial presence in itself combines
The best of cordials, tonics, anodynes.

—OLIVER WENDELL HOLMES

JMSMS

Some Clinical Uses of Endocrine Products in Gynecology

By Robert B. Kennedy, M.D.
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I WOULD LIKE to present a few conditions where you can be reasonably sure of your treatment without expensive and time-consuming laboratory tests, the treatment being given purely on clinical symptoms and physical findings.

In taking repeated menstrual histories, you will find many of your patients fall into one of several groups.

Group 1. Hyperestrin Group

In Group 1, the hyperestrin group, you will find the following history:

1. The patient's breasts become sore before menstruation. This period of soreness varies greatly. It may start two weeks before expected menstruation or it may start two or three days before the expected period.
2. The duration of the period is from one to four days and it is not profuse. If the period is prolonged, it is more or less dribbling.
3. The patient loses very little blood and has no clots.
4. The patient does not complain of headache before or during period. Many will say they have never been troubled with any type of headache.
5. They usually do not have large families, showing a more or less relative sterility.
6. Their red cell count and hemoglobin are usually normal, very seldom showing a secondary anemia even if they give a history of uterine bleeding over several weeks' duration.
7. The patient will often complain of a thick mucous vaginal discharge which is due to hyperactivity of the cervical glands.
8. Nausea during pregnancy is usually not severe and of short duration.
9. This group is more likely to develop fibroids and endometriosis than the other groups.
10. They are more likely to abort during pregnancy.
11. Sexually, they are normal or on the hyper side.

12. They may or may not have dysmenorrhea, mild or severe. Occasionally they develop secondary dysmenorrhea.
13. They may be thin or overweight.
14. They may develop polycystic ovaries.
15. They seldom complain of ovarian pain if the ovaries are normal.

First, why do these people give this type of menstrual history?

Second, why do patients belonging to this group come to a physician?

First, this is the group you might say have too much estrin or theelin in their system, or it might be that they do not utilize the theelin or estrin as they should. For clinical purposes, you may say their estrin and progesterone are out of proportion and they have an excess of estrin.

Second, why do they come to a physician?

For Sterility

1. They may be having anovulatory menstruation, and if an endometrial biopsy is done close to menstruation, the endometrium will show a poorly developed secretory phase.
2. They may have so much thick mucous coming from the cervical canal it prevents the sperms from reaching the uterine cavity. The treatment here is thyroid to tolerance, progesterone 10 mg. intramuscularly every other day during the last fourteen days of the cycle, plus correcting the cervical discharge.

We know there are certain substances that either help these people utilize their estrin or neutralize the estrin. They are: (1) thyroid, (2) vitamin E, (3) testosterone, (4) progesterone.

For Soreness of Breasts Before or During Period

Some breasts will start becoming sore two weeks before the expected menstruation, some only two or three days before menstruation. Thyroid alone will sometimes control the symptoms. Sometimes thyroid plus vitamin E, in the form of pure alpha tocopherol, will be necessary. You should start with thyroid gr. $\frac{1}{2}$ daily and increase weekly by gr. $\frac{1}{2}$ daily until tolerance is reached. It is well to let the patient increase the dose until some of the toxic symptoms are produced, such as, headache, palpitation of the heart, shortness of breath or tremor of fingers. You should then gradually reduce the dose until the toxic symptoms disappear. It is well to discontinue the thyroid therapy for two months during the summer. Many have to

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gradually reduce the dose if they are taking it over long periods of time. Vitamin E should be given as pure alpha tocopherol, in doses of 200 to 1,600 mg. daily. Testosterone is not used if the patient is desirous of becoming pregnant, since it may prevent ovulation. It is probably the most satisfactory way of treating the sore breasts. The buccal testosterone wafers can be used having the patient insert one or two 5 mg. wafers between the upper lip and gum each night just before she retires. She should start treatment as soon as the breasts begin to get sore and continue until menstruation starts. Progesterone may be given in 10 mg. doses intramuscularly every other day from the fourteenth to the twenty-fourth day of the cycle.

For Prolonged Uterine Spotting of Blood

The duration will vary from ten days to several weeks. It is usually scanty in amount, but enough to cause the patient to wear a Kotex or Tampex over long periods. It is of interest to note that these patients may have continued bleeding over long periods and will show no signs of secondary anemia. The red cell count will usually be over 4,000,000 and the hemoglobin will show 12 gm. or over. They usually have a low prothrombin time, around 45 per cent of normal. Many will stop dribbling on thyroid gr. 1 daily for four to six days. If this happens, they should be continued on thyroid therapy. If they show a low prothrombin time, it is well to give vitamin K, vitamin C, and vitamin P along with the thyroid. If this does not control them, they should have a diagnostic curettage with a thorough pelvic examination under anesthesia, to rule out a pelvic pathologic condition. The endometrium on microscopic examination will show hyperplastic proliferative phase or the so-called Swiss-cheese endometrium. Progesterone may also be used in the last fourteen days of the cycle. Oftentimes the curettage will straighten these patients out for several months. Occasionally testosterone will be necessary, in as small doses as possible, 10 mg. in oil twice weekly intramuscularly.

For Secondary Dysmenorrhea

By primary dysmenorrhea we mean painful menstruation since the beginning of menstruation. By secondary dysmenorrhea we mean the patient menstruated for several years without pain and gradually the periods became more and more pain-

ful. The pain may be of ovarian origin, in which case it starts from one to two days before the menstruation bleeding begins. If pain is ovarian in character, it is usually due to pelvic inflammatory disease or endometriosis of ovaries. Polycystic ovaries cause little pain. True ovarian cysts produce little pain until they become large enough to cause pressure symptoms on the surrounding structures. If it is uterine in origin it begins with the flow. The most common cause of secondary dysmenorrhea, uterine in origin, is adenomyosis of the uterus. Pelvic inflammatory disease, fibroids and fibrosis uteri have to be ruled out. If the pain is due to adenomyosis, surgical treatment is the treatment of choice, presacral sympathectomy or total hysterectomy depending upon the age of the patient or the number of living children. If the pain is ovarian in character and due to endometriosis, resection of the nerve supply to each ovary is the treatment of choice. However, medical treatment may be tried for a few months before resorting to surgery. Theelin or estrin in any form usually makes symptoms worse unless given in very large doses. Enteric-coated stilbestrol given in daily doses of 5 mg. or more from the fourteenth to the twenty-fourth day of the cycle will occasionally give relief. Anti-spasmodics may be used beginning with the flow. Testosterone orally or intramuscularly during the last ten days of the cycle will often help.

For Dyspareunia or Painful Intercourse

There are four main causes for dyspareunia:

1. Small hymenal orifice with hypertrophy of hymen, or rigid perineum, or both, which are surgically treated.
2. Posterior urethritis or trigonitis of the bladder. Posterior urethritis is treated with 5 per cent silver nitrate or by fulguration. Trigonitis of the bladder is very often due to an endocervicitis, the lymphatics from the cervix coming up to the trigone of the bladder. The cervix must be treated to cure the trigonitis. This can be done by cautery, conization, amputation of the cervix or a total hysterectomy. A total hysterectomy in many cases is the only way to produce a cure.

3. Certain types of vaginal discharges. There are two frequent vaginal discharges which cause dyspareunia: (1) trichomonas vaginalis vaginitis; (2) fungus infections of the vagina.

4. Endometriosis of the pelvis. To produce dyspareunia, the endometriosis is either in the

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cul-de-sac, the uterosacral ligaments or in the ovaries. The diagnosis of endometriosis can many times be made on vaginal examination, drawing the cervix forward, thus putting the uterosacrals on tension which may produce the pain they experience at intercourse. Examine the posterior cul-de-sac, carefully, for small shot-like masses, exquisitely tender, particularly so if just before or during menstruation. A history of long-standing pelvic discomfort with pain on bowel movement during the menstrual period may mean endometriosis of the posterior cul-de-sac. Enlarged adherent tender ovaries may mean chocolate cyst formation in the ovary. Patients with endometriosis may give a history of being treated over a long period for pelvic inflammatory disease with unsatisfactory results. These conditions may be treated medically or surgically.

There are many articles of literature on the surgical treatment of endometriosis. In the last few years, Dr. Karnaky of Houston, Texas, has been writing profusely on the treatment of endometriosis by the oral administration of stilbestrol (Des) made by the Grant Chemical Company. He starts with $\frac{1}{2}$ mg. daily and increases it daily giving the patient large doses of seconal or nembutal by rectum to prevent nausea. He does this until the patient is taking 10 mg. daily and then eliminates the barbiturates. These patients must be hospitalized until they are able to take 10 mg. daily without nausea. From then on they can be discharged and it can be increased gradually without any gastrointestinal symptoms. Although Karnaky has never mentioned the necessity of hospitalization of patients at the beginning of the treatment, we have never been able to get a patient beyond 3 or 4 mg. per day at home without the patient stopping the medication because of nausea and vomiting. Therefore, hospitalization at the beginning of the treatment is very important. The dose is gradually increased until they are taking a daily dose of 250 to 300 mg. Then it is gradually reduced. The course of treatment covers from three to six months. So far, we have treated four cases of severe endometriosis of the pelvis by this method following surgery with a definite pathologic diagnosis. The results of these cases are still questionable. None of these patients were ever pregnant before treatment. All have finished their course in the last three months and to my knowledge none are pregnant to date.

One patient, an unmarried girl in her twenties,

had an unusual amount of uterine bleeding during the months of stilbestrol therapy. On one occasion it was necessary to hospitalize and give blood transfusions and increase the stilbestrol to 500 mg. daily. This patient has been examined since therapy was completed. The nodule in the cul-de-sac is still present and very tender. Result: not satisfactory.

Another patient had dribbling of blood from the vagina almost continuously during her months of treatment. This patient was examined recently under an anesthetic and her pelvis feels entirely free of the nodules present at the beginning of the therapy.

The two other patients experienced no trouble during the course of treatment.

We know that pregnancy inhibits the progress of endometriosis, and it is on this theory the above treatment is based. During pregnancy the placenta produces estrin and progesterone in much larger quantities and continuously over several months' duration, and by the administration of stilbestrol in large doses over the long periods, the pregnant state is more or less simulated in part. Whether stilbestrol in large doses increases or does not increase the excretion of pregnadiol in the urine is still a debatable question, pregnadiol being the end result of progesterone metabolism. If its excretion is increased it means stilbestrol in large doses is utilized as progesterone. Smith and Smith contend this theory is correct.

Other workers, Davis from Chicago and two very reliable English investigators, contend that feeding stilbestrol does not increase the excretion of pregnadiol in the urine.

Another form of medical treatment is the continued use of small doses of testosterone daily by mouth or parenteral injections twice weekly, using the smallest doses which will control the patient's symptoms.

Again, stilbestrol in 5 mg. enteric-coated tablets may be given by mouth enough days of each cycle to control symptoms. It should not be given in the last four days of the cycle. If nausea occurs the first days of the therapy, small doses of seconal or nembutal by rectum may be used.

For Excessive Bleeding With Periods Of Amenorrhea

These patients are very uncommon but also very difficult to treat. The condition usually occurs in young girls from fourteen to eighteen years of age.

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I have only treated three such cases in twenty-six years of practice. Usually you are first consulted when the patient is having repeated or continued uterine bleeding. The patients will lose three to four pints of blood daily and will require numerous blood transfusions to maintain life until the bleeding is controlled. Freshly drawn blood should be used instead of bank blood. Fresh blood will increase the patient's prothrombin time. On curettage, a hyperplastic proliferative endometrium will be found and many believe the profuse hemorrhage is due to pathology of the spiral vessels of the endometrium.

The treatment consists of four things: (1) stopping the uterine bleeding, (2) building up the patient's physical condition, (3) prevention of recurrence of such periods, (4) preservation of the generative organs.

Stopping the Uterine Hemorrhage. — This usually is accomplished with a very thorough curettage and packing the uterine cavity with one-inch sterile bandage soaked in 10 per cent ferric chloride solution, the excess solution well wrung out of the bandage before packing the uterine cavity. The packing is removed after twenty-four hours.

Building up the Physical Condition. — The repeated use of blood transfusions is the quickest and most satisfactory; 500 c.c. every other day until the red cell count and hemoglobin are well within normal limits.

Prevention of Future Hemorrhage. — X-ray to the pituitary and injections of an anterior pituitary-like hormone, which is the lutenizing hormone, have not proven satisfactory. In our experiences, intramuscular injections of testosterone in oil have given the best results. At present, we have one patient having normal regular periods of five days duration on 10 mg. of testosterone twice weekly intramuscularly. She has been on the regime for eight months or longer without showing any signs of masculinization. A member of her family was taught how to give the injections, and we see her in the office at intervals of two months. Thyroid, usually tolerated well, should be given in as large doses as possible without producing toxic symptoms.

Maintenance of Good General Health. — (1) adequate diet, high in proteins; (2) diet may be

supplemented with a capsule containing vitamins plus the tracer minerals, such as Roerig's Viterra Capsule; (3) encourage the patient to include plenty of citrus fruits, lemon peel, and skim milk in the diet; (4) have at least eight hours sleep nightly; (5) avoid emotional upsets and mental strain; (6) strive for normal elimination.

For Hyperestrinism at the Menopause

The patient complains of being exhausted and unable to do her house work, irritability and hard to live with. On questioning the patient, you will find they complain of soreness of breasts most of the time, do not suffer from headaches, have no hot flashes, no night sweats. They sleep well but require a lot of sleep. On examination they are usually well nourished, with blood pressure normal or below normal, red cell count and hemoglobin normal. They usually have a thick mucous discharge from the cervix. The basal metabolism is on the low side.

Treatment. — (1) Thyroid to bring their metabolism up to normal; (2) Buccal testosterone wafers, 5 mg. The patient should be instructed to place the wafer between the upper lip and upper gum on retiring. One or two daily, or the smallest dose possible to completely eliminate the soreness of the breasts.

On the above treatment, the patient usually returns feeling fine. Members of the family will see to it that her medication is kept up.

Group 2. Hypoestrin Group

In Group 2, the hypoestrin group, you will find the following history.

1. Sore breasts. Most frequently the patient has no breast changes before periods. The breasts may become a little engorged just before or during the period, but the patients do not complain of soreness.

2. Duration of period. These patients menstruate from six to eight days. The first few days the bleeding is profuse with clot formation. Many will say they wear three to four Kotex pads at a time for necessary protection. Many bleed so profusely that they are forced to stay off their feet for the first two days of their period.

3. These patients lose a lot of blood at each period.

4. Headaches. These patients usually com-

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plain of headache in the occipital region or the top of the head from one to three days before menstruation or during menstruation. Many say they have had a great deal of headache all their life. Many feel sorry for themselves and belong to the group of chronic complainers.

5. These patients produce a good ovum each month and usually become pregnant very easily, and if contraceptives are not used, they have large families.

6. Anemia. The majority of these patients will show a definite secondary anemia.

7. Vaginal discharge. Unless they have trichomonas vaginalis, fungus infection or an endocervicitis with erosion, they do not complain of a discharge. Some will complain of their vagina being dry during intercourse.

8. Nausea during pregnancy. It is usually more marked than in Group 1 and may become quite stubborn to treatment. Many of these patients complain of severe headaches during the first part of pregnancy. The headache many times disappears on varying doses of stilbestrol, 5 to 15 mg. daily.

9. Fibroids, endometriosis. To my knowledge, I have never found fibroids or endometriosis in this particular group of patients.

10. Abortions. The percentage of abortions is considerably lower.

11. Sexually, they may be normal or may not be interested. Oftentimes they experience little or no satisfaction.

12. They may or may not have dysmenorrhea, mild or severe. They do not often develop secondary dysmonorrhea.

13. They may be thin or overweight.

14. They seldom develop polycystic ovaries.

15. Many complain of ovarian pain with normal appearing ovaries.

First, why do these people give this type of menstrual history?

Second, why do patients in this group consult physicians?

First, clinically this group seems to lack estrin and have an excessive amount of progesterone produced or they have a normal amount of estrin produced but use it up rapidly. The second explanation may seem more reasonable since at the menopause many of this group need large doses of estrin to control their menopausal symptoms and can take large doses without producing uterine bleeding.

For Excessive Loss of Blood at Menstruation

These patients have an excessively long period, lasting from six to eight days, sometimes ten days. The amount of blood loss and duration of the period can usually be controlled by feeding estrone sulfate by mouth. Estrone sulfate is used since it is readily utilized by the system and has no accumulative effect. It is well tolerated and very seldom causes side effects in the patients of any age. It is given daily from the fourth day of the cycle until the twenty-fourth day of each cycle in doses of 2.5 mg. daily. It is understood before such treatment is instituted that any pathological condition such as pelvic inflammatory disease must be ruled out.

For Premenstrual or Menstrual Headaches

Mostly, these headaches are in the occipital region but may involve the top of the head or the temporal regions. The headaches can be eliminated or greatly benefited by the administration of estrone sulfate by mouth from the fourth to the twenty-fourth day of the cycle. The dosage will vary from 1.25 to 2.5 mg. daily.

The complaint of feeling tired, difficulty in keeping up their housework, nervousness and irritability. On examination you will commonly find a lower red blood count and hemoglobin. They very often have a low basal metabolism. Many are allergic to food and have histamine headaches besides premenstrual headaches.

Treatment.—(1) anemia should be diagnosed and treated; (2) metabolism brought up to normal with thyroid; (3) adequate diet with vitamins and minerals; (4) estrone sulfate in large doses from the fourth to the twenty-fourth day of the cycle.

For No Sexual Satisfaction

In this group there are some who experience no sexual satisfaction and have an aversion to the sexual act. Occasionally estrins help but usually this is a psychiatric problem and is best treated by a psychiatrist.

For Nausea and Headaches at the Beginning of Pregnancy

The headaches are usually controlled easily by 5 mg. of stilbestrol daily. The nausea is treated by one of the many ways advocated at the present time.

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After about three children in rapid succession, they want to know how to keep from becoming pregnant.

For Dysmenorrhea

Dysmenorrhea in this group is usually primary and a pregnancy with a delivery through the pelvis most times cures the dysmenorrhea. If pregnancy is impossible, estrin in the last fourteen days of the cycle will often help. Pranone or progesterone will not benefit dysmenorrhea in this group. Antispasmodics at the onset of menstruation may be tried and if no possibility of marriage is in view, a presacral neurectomy may be justified. If secondary dysmenorrhea develops, pelvic inflammatory disease must be suspected since endometriosis or fibroids seldom develop in this group.

Group 3. Hypoestrin-Hypoprogesterone Group

In Group 3, the hypoestrin-hypoprogesterone group, you will find the following history.

1. No soreness of breasts before menstruation.
2. Duration of menstruation is from one to three days.
3. Loses very little blood—no clots.
4. No occipital headaches before or during menstruation. If they do have headaches they are usually of the histamine type.
5. They show a relatively high rate of sterility.
6. They may or may not have dysmenorrhea.
7. Sexually they may be normal or below normal.
8. They seldom develop fibroids or endometriosis or adenomyosis.
9. They usually start to menstruate later in life than normal and have their menopause earlier than normal.
10. If they become pregnant, abortions and premature labors are higher than normal.
11. They may or may not be hypothyroid.
12. On pelvic examination the vagina, cervix and uterus are smaller than normal.

Why does this group give this type of history?

The genital organs are below normal in development. The pathology is probably in the pituitary gland or the thalamus. Their ovaries produce an insufficient amount of both the known ovarian hormones, namely, estrin and progesterone.

Why do these patients consult a physician

For Sterility

Their sterility is many times due to non-production of an ovum, or the production of an ovum which will not go on and develop after fertilization. When such a patient consults for sterility, the usual routine tests should first be done such as:

1. Determining the patency of the fallopian tubes.
2. Basal metabolism test.
3. General physical examination including complete blood count, urinalysis, et cetera.
4. Endometrial biopsy before menstruation starts.
5. Accurate sperm count on the husband with a total count per c.c. and differential and motility.
6. Basal temperature chart, or better, Pharis rat test for ovulation. If the conclusion is reached by the above tests that sterility is due to inadequate ovulation, several courses of treatment may be followed. Stimulation therapy or substitution therapy. Stimulation therapy may be twofold.

X-ray treatment, stimulating doses to the pituitary gland and to each ovary. Some authors claim as high as 40 per cent pregnancies occur after such treatment.

The use of the gonadotropins as stimulators to the ovaries, the follicle stimulating hormone being used in the first twelve days of the cycle and the lutenizing hormone being used in the last sixteen days of the cycle. It is now the opinion of some endocrinologists that these hormones used over too long a period will cause a further atrophy of the ovaries. Some clinics use fairly large doses of lutenizing hormones: 400 units every other day for fifteen doses, disregarding the menstrual period. All of the above treatment has been quite discouraging in our hands.

Substitution Therapy.—This form of treatment includes estrin. It is given by mouth or hypodermically during the first fourteen days of the cycle. Then during the last fourteen days, progesterone is given by hypodermic injection. Oral administration of progesterone has not proven satisfactory. This therapy should be kept up for at least three months.

If the patient lacks thyroid, it is very important to bring her metabolism up to normal.

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Group 4. Normal Menstrual Group

Those belonging to this group have no menstrual difficulties and are seldom seen by a gynecologist.

Pre-Menstrual Tension

In Group 1, or the hyperestrin group, premenstrual tension is usually more common.

The treatment is aimed at utilizing or neutralizing estrin. This can be done in one of the several ways or a combination of ways:

1. Thyroid should be given daily if tolerated and to tolerance.
2. Progesterone by mouth or hypodermically.
3. Vitamin E by mouth.
4. Testosterone by mouth or hypodermically.
5. Ammonium chloride by mouth, enteric-coated tablets, 90 to 120 gr. daily. Intake of sodium should be restricted by the 200 mg. sodium diet during this time. Ammonium chloride is best given over a three-day period with a rest of three or four days and repeated again for three days.

Pre-Menstrual Tension

In Group 2, or the hypoestrin group, premenstrual tension is not as frequent as in Group 1.

Treatment is aimed at supplying more estrin, in the younger patients estron sulfate by mouth in doses sufficient to control symptoms. In older patients, parenteral injections of estradiol benzoate or alpha estradiol in water or oil may be necessary. Testosterone by mouth or by hypodermic beginning before symptoms occur may be used with success.

Menopausal Symptoms

So many papers have been published on this topic it need only be mentioned. The patient may be still menstruating and complaining of one or more of the menopausal symptoms: (1) occipital headaches, (2) hot flashes, (3) night sweats, (4) inability to concentrate, (5) insomnia. If so, estrone sulfate in daily doses sufficient to control symptoms proves satisfactory in many.

If the patient is past the menopause, therefore not menstruating and wants to be relieved of distressing symptoms, ethinyl estradiol or alpha estradiol gives the patient more of a feeling of well being and relieves symptoms better than some of the other estrins or estrin-like drugs on the

market. In a very small percentage of patients, oral therapy will fail and parenteral therapy will be necessary.

Amenorrhea

Amenorrhea may be primary when menstruation has never occurred or secondary when menstruation has previously occurred.

Causes of Amenorrhea. — (1) Mechanical causes. (a) imperforate hymen, (b) atresia of vagina, (c) congenital defects. (2) Pituitary derangements. (a) adiposogenital dystrophy (Frohlich's syndrome), (b) pituitary cachexia (Simmonds' disease), (c) pituitary adenoma. (3) Thyroid derangements. (a) primary hypothyroidism, (b) hyperthyroidism. (4) Adrenal gland derangements. (a) adrenocortical hyperactivity (adrenal virilism), (b) adrenal insufficiency (Addison's disease). (5) Nervous system derangements, (a) anorexia nervosa, (b) mental diseases, (c) emotional states.

Treatment. — (1) If patient is overweight, reduce to average weight for height and age; (2) check metabolism, blood cholesterol, iodine content of blood. A very thin person may be a marked hypothyroid and require large doses. Keep metabolism slightly above normal; (3) high protein, high vitamin diet with adequate minerals; (4) X-ray stimulation to pituitary and ovaries; usually fails in primary amenorrhea; fair results in secondary amenorrhea; (5) artificial bleeding can be induced by several methods: (a) Zondek method—1,500 rate units of estradiol benzoate plus 12½ mg. progesterone daily for two doses—repeat every twenty-eight days for three months; (b) Kaufman method—100,000 I. U. estradiol benzoate every three days for five doses, then, 10 mg. progesterone daily for five days. Repeat therapy every twenty-eight days for three months; (c) stilbestrol 3 mg. by mouth daily for twenty days, then, stop for eight days. On the stilbestrol treatment I have had two patients become pregnant, go to term and deliver normal babies. One patient had not menstruated for two years before treatment was started and continued on above routine for one year before becoming pregnant. The second patient had been amenorrheic for six months before treatment began.

(Continued on Page 572)

Specificity of the Vitamins — Their Proper Clinical Use

By M. A. Blankenhorn, M.D.
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EVEN if I had much longer time, I would not devote much of it to a discussion of the specificity of all of the substances now known as vitamins. It would be a waste of time for me, a clinician, to go into matters that are biochemical and that deal with the nutrition of animals in experimental laboratories. Of this basic knowledge on which our clinical practice rests, there can be no doubt as to specificity of vitamins for specific deficiencies, but there may well be some doubt about the specificity of deficiency disease as it occurs naturally in man. There is certainly good reason to doubt the present-day methods of diagnosis of deficiency disease. It is because these doubts exist that such topics are put on your program.

I believe that many doctors have lost sight of the fact that vitamins were in every instance discovered by animal testing with specific diets, and their use in humans was based on rather loose analogy which found some similarity between the symptoms of disease in man and the provoked symptoms in animals. A good example to illustrate the method and the point I have in mind is the way in which nicotinic acid has been employed to prevent and cure pellagra to a degree that pellagra has become quite a rare disease. Pellagra was known to be prevalent among people who lived on diets of limited variety. It was produced in the early part of the century by Goldberger in human subjects by feeding limited diets. It was cured by good diets or by adding potent concentrates such as yeast and liver extract to poor diets. Similar poor diets caused black tongue in dogs (black tongue occurs naturally or spontaneously in dogs), and black tongue could be cured by liver extract and fractions of liver extract. Eventually, black tongue was cured by nicotinic acid, which is known to be a fraction of liver extract and can be synthesized from other sources than food. By seeing the similarity of black tongue to pellagra,

physicians were led to treat pellagra with nicotinic acid successfully.

The acute dermatitis and glossitis phases of pellagra were promptly cured, and up to that point the cure was specific, but there remained other aspects of pellagra such as conjunctivitis and cheilosis, now known to be cured by riboflavin, and the neuritis, now cured by thiamine. It thus appeared that for a brief time a few years back, we thought the specific cause of pellagra was a lack of nicotinic acid in the diet and, of course, the cure was nicotinic acid. We were not long in finding the answer was not so easy nor the situation so simple. When the rôle of deficiency of riboflavin and thiamine was discovered also as a factor in pellagra, it became more clear that pellagra, as most deficiency diseases in man, was multiple and probably not ever specific in a strict sense. It has been knowledge of that fundamental principle that leads us to advise in every instance that correct diets be prescribed as the main and most important item in therapy. It thus appears that where deficiency diseases are easily recognized, this rather nonspecific method is usually successful, but no one knows what other phase or symptoms of pellagra might develop if people lived on poor diets for a long time, meanwhile supported by nicotinic acid, riboflavin and thiamine. Attempts have been made to find such parts of pellagra as may be cured by other fractions of liver extract, such as pyrodoxine or folic acid.

To a lesser degree, adult scurvy and beriberi are found to be complex or multiple deficiency states not entirely cured by adding vitamins to poor diet. It is thus I hope to show how hard it is to put forth specific quantitative information about the vitamins and their use in man. I may seem a bit pedantic in retailing now what everyone knows or once did know, but I go over the old ground because so much has been written about vitamins and so many miracles claimed that these simple beginnings and the incompleteness of our knowledge are frequently forgotten.

I should say something here about specific tests to diagnose vitamin deficiency diseases by assaying the body needs and the body stores. There is not very much to be said, however, except that mostly they are not precise enough to make any of them good tools for clinical research nor are they needed for clinical practice. In scurvy and in vitamin A disease, one can test the blood levels and in some instances also excretion rates in urine

From Department of Internal Medicine, University of Cincinnati, and Cincinnati General Hospital. This study was aided by a grant from the Robert Gould Research Foundation.

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VITAMINS AND THEIR USE—BLANKENHORN

after test doses are given and a rough approximate is reached so that one can say that a diagnosis is probable but not that diagnosis is certain. This parlous state of affairs is true for vitamin A, thiamine, nicotinic acid, riboflavin, ascorbic acid, pyrodoxine and vitamin D. With vitamin K, we are more exact, but we are certainly round about in our method, i.e. by measuring prothrombin time and not vitamin K. In this state of affairs, who is to say what is the proper use of the vitamins in the practice of medicine? There is now but one sensible answer, and that is whatever works and does no harm. There are some who would add to this formula—"whatever does not cost so much" and others would add "whatever can't be bought without prescription." The proper use then depends largely in what circumstance the well person becomes a patient.

What is proper depends in large part on what sort of patients one treats. In the Cincinnati General Hospital,⁴ where I do most of my practice, many of the patients are chronically ill—some are underfed, more are poorly fed, some are acutely ill in ways that make nutrition difficult. Some are alcoholic and consequently have poor diets. We suspect deficiency disease among all these people, and in the last fifteen years have many times made diagnosis of and treated successfully a great many with pellagra, scurvy and beriberi. I recently reported a ten-year study showing a notable reduction in incidence and proposed that improved food and economic conditions have somehow improved the nutrition of these people. We still use a great many vitamins in our practice, however. In the calendar year 1949, the bill for vitamin therapy in the Cincinnati General Hospital was \$6,354.00. This therapy was administered to 15,750 in-patients and 24,000 out-patients. The largest cost was for vitamin K, the next largest was vitamin B-complex injectable, and the third greatest was for multiple vitamin capsules which are mainly used in the out-patient. Altogether, less than 10 per cent of our vitamin costs are for out-patients. We think this is conservative—i.e., \$6,354.00 being about 1.4 cents per patient. This does not include liver extract nor yeast. We have used pyrodoxine and vitamin B₁₂ as experimental substances. We have used no vitamin E (alphotaceophesal) for heart disease or anything else. Most of the vitamin C is used by the Surgical Service.

I should say to general practitioners in your situation, as I assume it to be, that none of you will

need give vitamins to the extent that I do. I do think it proper, however, to give them always to people who have lost weight for three months or more for any reason. Where there has been anemia and other deterioration because of prolonged fevers and other causes for increased metabolism—where the diet needs are peculiar and cannot be liberally varied because of heart, kidney or gastrointestinal disease—in all such situations where the need is greater than average and the intake less than normal, mixed vitamins may properly be given. The hard question now is how to tell when the intake is less than the need. This problem is most vexatious when we aim to produce maximum health and efficiency among apparently well people. It is vexatious when a survey is made of an entire population who are suspected, as are certain labor groups, share croppers, and others, or citizens in occupied European countries. The question is vexatious when we deal with individual patients in an office or hospital practice, and I have no handy formula which will answer these conditions. Within the past six years there has been a lot of thoughtful collecting and critical reviewing of literature which accomplishes a small monthly publication called *Nutritional Reviews*. It has been well received, and usually its reviews are correct. I recommend them to you, but there will be no ready relief from the vexation of these three questions I just mentioned.

The first question, about maximum health, has been the continued business of a committee of the American Medical Association and the National Research Council. The answer takes the form of the recommended daily allowances which are published from time to time. It is generally admitted by those on the committee that in the light of information gathered from starved populations in wartime and from amply fed populations as in our own armed forces that these allowances are high. In thiamine, the allowance has been revised downward. When army rations went over these allowances, no superior performance in work or well-being resulted. There is still no recommendation for any of the newer and more specific vitamins, such as pyrodoxine, pentothenic acid, folic acid or B₁₂. Only vitamin A, thiamine, riboflavin, niacin, ascorbic acid and vitamin D are well enough studied, and perhaps not those, but the committee puts the allowance plenty high. There is now available a report entitled "Malnutrition and Starvation in Western Netherlands,"⁵

a government publication from the Hague on the result of a survey. It is to be noted that whereas starvation had reached severe proportions among civilian population in 1945, and more than 10,000 lost their lives from famine, there was little evidence of specific clinical deficiency disease observed by the nutrition experts who came on the scene immediately after capitulation. I think this and other similar studies in semistarved people cast much doubt on the concept of hidden hunger among the general population in well-fed America. There is also not much now to support the notion that we can make supermen or superwomen by prescribing daily doses of vitamins. There is ample proof from the study of large groups that it cannot be done.

There remains now the problem of deciding in any given instance whether the patient shows any sign of malnutrition, i.e. a lack of sufficient vitamins. First, let me say that no accepted methods have been developed which uses biopsy of any one or several tissues. Also, no chemical tests are workable. The method of diet history-taking gives only a hint that nutritional failure may be present. There seems to be no diet anyone will eat that must in all instances cause deficiency disease. The accepted method for recognition of nutritional failure in an individual is the one employed in all modern nutrition surveys, whether it be of European war sufferers or U. S. soldiers on controlled ration experiments and that is the examination of the patient by inspection. This requires no instruments except good eyes and good light. When observers are trained and agree upon a uniform method of recording what they see, there is a high degree of agreement among teams or of paired examiners so that the method can be used as a research tool capable of statistical analysis. My former associate, Dr. William Bean,² made such a test of the methods of nutritionists and reported results in the *American Journal of Applied Physiology*.

Almost identical methods were used by the teams of physicians who went into Great Britain, Occupied France, and Holland. The same methods also were used in surveys of the white population in Labrador in 1944 and 1948.¹

Since this method requires mainly an acceptance of a brief vocabulary together with definitions, I find it worth retailing here as a key to the diagnosis of nutritional failure, i.e. a guide to the proper use of vitamins.

It should be said at once than no *one* of the signs described is specific. Any may be caused by other than nutritional failure, but in the aggregate they are as precise as physical examination generally is. The skin, the mucous membranes of the eyes, mouth and tongue, and the nerves of the lower extremities are principally concerned.

Here are the descriptive terms or diagnostic signs with definitions:

Blepharitis is a diffuse inflammation involving the eyelid border. It may appear as a squamous (scaly) or ulcerative form. The squamous form is characterized by the presence of small scales seen on and between the cilia. Occasionally, a yellowish crusting due to over-secretion of the glands may occur accompanied by hyperemia but usually without ulceration. Cilia may become loosened and extruded. With the ulcerative type, in addition to the hyperemia and crusting, superficial abscess of the hair follicles may occur, appearing as small pustular elevations surrounding the base of the cilia. As the condition progresses over a long period, the follicles may be destroyed, the cilia permanently lost, and their pits occupied by scar tissue.

Chronic hypertrophic blepharitis with thickening of the eyelid border may result in drooping lid.

Xerosis is characterized by a thickening and loss of translucency of the sclera.

Pinquecula is a localized, visibly elevated, yellowish-grey colored thickening of the conjunctiva.

Suborbital pigmentation is a purplish-blue discoloration of the area immediately under the lower eyelids with or without swelling.

Angular stomatitis is a characteristic fissuring of the mucous membrane at the angles of the mouth. It is considered significant only when bilateral and when there is no external lesion at the angles of the mouth from which a fissure might lead. The presence or absence of a grey film over the lesion is not considered to be significant.

Cheilosis is a reddening of one or both lips, accompanied in more severe cases by transverse fissures.

Red gums may be found in the presence of normal dentition in the front part of the mouth from first molar on the left to the first on the right in both jaws.

Edema of gums is sought in the same area and with the same restrictions as applied to red gums.

Stomatitis is found only in the absence of carious

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Essentials in Psychotherapy

By Franz Alexander, M.D.
Chicago, Illinois

THE DIFFERENT forms of psychotherapy constitute a most heterogeneous array of procedures: some of them are based on elaborate psychological theory; others merely on intuition and so-called common sense. They all have one feature in common: they all try to correct the patient's disturbed state of mind by psychological means.

Psychotherapy as an etiologically oriented procedure is based on the knowledge of psychodynamics, the science of motivations. Even in its most primitive form psychotherapy is based on some intuitive knowledge of human motivations. Everyone who tries to console a despondent friend, calm down a panicky child, in a sense practices psychotherapy. In doing so, he uses his common sense understanding of the nature of the disturbance. Talking over an acute harassing experience with someone is based on the intuitive knowledge of the curative effect of emotional unloading, called abreaction. Giving advice, while assuming a firm attitude, is also based on the common sense knowledge that the confused, frightened individual needs emotional support which we can give him by allowing him to lean on us. Intuitively we know also that a person who is overwhelmed by fear in a dangerous situation cannot use his reasoning faculties effectively and needs at first firm advice and not explanations. Only after he has calmed down can he obtain some rational insight into his condition. Giving him at first emotional support, then some explanations, combines supportive measures with insight. All this makes it evident that most of the well-established therapeutic factors used in medical psychotherapy, such as support, abreaction, insight, persuasion, and above all, emotional rapport with the disturbed person, are constantly used in everyday life. Medical psychotherapy is, to a large degree, a systematic application of methods by which we influence our fellow men in daily life. The most important difference between using psychology in everyday life and scientific psychotherapy is that in the latter

intuitive knowledge is replaced by the well-established principles of psychodynamics.

The most consistent attempt to place psychotherapy on such generally valid psychological principles is represented by psychoanalysis. One must differentiate psychoanalytic therapy from the psychodynamic foundations of psychoanalysis. Psychoanalytic therapy, as originally conceived, is only one application of the psychodynamic principles established by psychoanalysis. In its classical form, psychoanalytic treatment can be applied only in certain types of cases.

From the psychodynamic point of view there are two kinds of psychotherapy: (1) supportive therapy, and (2) uncovering or reconstructive procedures. The rationale of these two kinds of procedures can be understood only in the light of the fundamental concepts of psychodynamics. Although psychotherapy is used in a great many conditions, such as in organic illnesses and in psychoses, its main application lies in the large group of psychoneuroses and somatic conditions in which emotional factors are important.

In all these conditions, we deal with an impaired function of the ego. When we speak of the ego, we refer to the organ system whose anatomical and physiological substratum is the highest integrative center of the central nervous system. The function of the ego consists in finding ways and means for the gratification of the subjective needs by adequate behavior. In the ego's functions three kinds of activities can be distinguished: (1) perception—both internal perception of the subjective needs and the external perception of the environment; (2) the integration of the data derived from both kinds of perceptive activities; (3) the executive function of the ego which consists in finding the type of motor behavior by which the subjective needs can be gratified in harmony with each other and the existing external conditions. The fact that this complex three-fold function of the ego can be disturbed in different ways, accounts for the various types of mental disturbances.

One large group of diseases based on disturbed ego functions are psychiatric disturbances caused by organic changes of the brain tissue resulting from mechanical injuries or toxic influences or progressive degeneration due to the aging process. In such conditions psychotherapy has only an accessory and occasional application.

Another group comprises psychiatric conditions which are due to injurious experiences in inter-

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ESSENTIALS IN PSYCHOTHERAPY—ALEXANDER

personal relationships. These may be acute or chronic.

Acute Conditions.—Under the influence of excessive emotions, rage, grief, and frustration, and particularly anxiety, the ego's integrative functions may be temporarily impaired. Everyone experiences occasionally the paralyzing effect of anxiety upon his ability to act rationally. Excessive rage also makes a person act in a way which is out of harmony with his accepted standards and existing interests. Under excessive emotions behavior becomes irrational; it is directed mainly to relieve the immediate tension irrespective of consequences. The most common examples are the different forms of war neurosis. Also in peacetime, such acute neurotic disturbances are not infrequent. They may assume almost any form: acute depressions, anxiety states, hysterical conversion symptoms, vegetative neuroses, which may develop in otherwise well-adjusted persons when exposed to life situations beyond their capacity to master. In such acute conditions, the primary aim of therapy consists in reducing the intensity of the disturbing emotions by *emotional support* which reduces acute anxiety and confusion. The ego's functional capacity is fundamentally intact and is only temporarily impaired by excessive emotions. In such supportive psychotherapy, sedatives may also be of considerable value. Since in acute emotional situations the ego's perceptive functions—the faculty of clear analysis of the external situation and also the ability to weigh and co-ordinate emotional needs is likely to be impaired, the therapist can help in giving *intellectual insight* by clarification of the emotional issues and existing external circumstances involved. It is important to remember that acute conditions if not treated are likely to become chronic, because the failure to meet actual life situations has a demoralizing effect upon the ego and may mobilize poorly resolved conflict situations of the past. Once the ego fails in one situation, all functions of mastery may break down. This explains why in traumatic neurosis the patient may lose the basic faculties of mastery, such as walking, speaking, in fact all co-ordinated movements, and regress to the completely helpless state of infancy. The regressive tendency is present in everyone, and when life conditions become difficult, the tendency to return to the less responsible and more secure situations of childhood is strengthened. Such regressive evasion of existing difficulties is an integral

part of every neurosis and psychosis. Early treatment of acute conditions by restoring self-confidence and thus blocking the more extended breakdown of the integrative function is therefore of primary importance.

Chronic Conditions.—Chronic failures of the synthetic ego functions develop insidiously under the influence of injurious interpersonal relations. The disturbing experiences may start in early childhood or later. Conflicts centering around early sexual and hostile impulses as they appear in the family situation are the most common causative factors. In such cases merely supportive therapy is of little value, and the uncovering types of psychotherapy are indicated. In these, we expose the ego in the treatment situation to the original emotional constellation which it could not resolve in the past. The revival of the original conflicts in the transference situation (the emotional relation to the physician) gives the ego a new opportunity to grapple with the unresolved conflicts of the past. Independent of the form of therapeutic approach—whether it consists of prolonged daily interviews or briefer application of psychoanalytic principles—all uncovering psychotherapy is based on what might be called the principle of "*corrective emotional experience*." The pathological effect of earlier emotional experiences is corrected by exposing the patient to the same type of emotional conflicts in the therapeutic situation. The therapist, however, reacts differently, not as the parents, teachers, relatives, or friends in the past. This difference between the therapist's reaction from the original parental reactions is the fundamental therapeutic factor.

It is important to realize that the new mastery of an old unresolved conflict in the transference situation becomes possible not only because the intensity of the transference conflict is less than the original conflict—is only a "shadow play" of the original conflict—but also because the therapist assumes a different attitude from that which the parent assumed toward the child in the original conflict situation. The therapist's attitude is objective and understanding—that of a physician trying to help a patient. He does not react to the patient's aggression by retaliation or reproach, neither does he gratify the patient's infantile claims for help. In this objective atmosphere of positive helpful interest, the patient not only becomes capable of expressing his original tendencies more

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frankly but can also recognize that his reactions are out of date and no longer adequate responses to his present life situation. Once they were in a sense adequate reactions—the reactions of the immature child to existing parental attitudes. In other words, while the patient continues to act according to out-dated earlier patterns, the therapist's reaction conforms strictly to the actual therapeutic situation. This makes the patient's transference behavior a one-sided shadow boxing. The patient has thus a unique opportunity not only to understand, but at the same time to *feel* the irrationality of his emotional reactions. Moreover, the therapist's understanding attitude not only allows the patient to deal differently with his emotional reactions, but makes such a new settlement necessary. The old pattern was not formed in a vacuum—it was the result of the emotional interrelationship between parent and child. In fact, it was an attempt of adaptation on the part of the child to parental behavior. When one link in this interpersonal relationship is changed—namely, the parental response—the patient's reaction becomes senseless. In this difference between the original pathogenic and the therapeutic situations lies the value of the analytical procedure. One must bear in mind that the neurotic patient's attitude is not completely dominated by his neurotic patterns. His attitude towards the therapist is a mixture of adequate reasonable reactions and preformed, rigid, repetitive neurotic behavior patterns. The free permissive atmosphere of the therapeutic situation—and primarily the fact that the patient comes for help to a person who does not judge him—encourages the unchecked expression of neurotic attitudes—particularly of the early dependent tendencies. The analyst, however, does not assume the protective parental attitude which the patient unconsciously seeks. This frustration provokes aggressive feelings in the patient similar to those he felt towards his parents when his unlimited demands were not fulfilled. Dependence mixed with resentment, because the therapist does not gratify these dependent wishes to the extent the patient desires, is the most common basic pattern upon which the individual variations of transference reactions are superimposed. At the same time, the patient, like every neurotic, has reasonable adult attitudes also. This dividedness in his personality is responsible for what one calls the neurotic conflict. His reasonable realistic attitude brought him to the therapist and makes him an

ally of the therapist with whom he tries to master his irrational neurotic reactions. And just because the therapist never abandons the realistic therapeutic attitude, the patient's neurotic behavior becomes pointless and one-sided and brings the irrationality of the neurotic patterns into sharp relief.

It is needless to say that if the therapist has the opportunity to advise the relevant members of the patient's environment and instruct them what attitudes to avoid in relation to the patient, the effectiveness of the therapy can be greatly increased. The therapeutic interviews are not the only medium in which the correction of the patient's neurotic reactions takes place. If the patient's environment, following the therapist's instructions, no longer responds to his neurotic patterns in the usual way, the neurotic behavior loses its sense. Now, not only in the transference but also at home or in the office, the neurotic behavior pattern fails to fulfill its unconscious purpose and becomes pointless. Unfortunately, in most cases the therapist does not have such a consistent co-operation on the part of all the persons who play an important role in the patient's life. In the case of neurotic adolescents, parental co-operation, however, is not unusual and often of decisive significance for therapeutic success.

A pedantic classification of therapeutic procedures into supportive and uncovering treatments is not possible, because in practically all therapy both types of approach are used. Even in the classical psychoanalytic treatment, there are important supportive components. The mere fact that the patient is assured that prolonged treatment may help him reduce anxiety. The dependent transference relation constitutes a powerful supportive measure. The outlook of a prolonged treatment allows the patient to postpone the final resolution of his conflicts. This, in itself, is likely to diminish neurotic anxiety. In fact, the supportive component in some therapy may become so powerful that it interferes with the progress of the treatment.

Quite early in his therapeutic experimentations Freud discovered that after a strong dependent transference has been established the patient continues the treatment not primarily to be cured, but to be treated. In fact, he may cling to his symptoms as excuse for the continuation of the treatment. Many of the most recent therapeutic investigations are primarily concerned with the crucial

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The Art of Anesthesia

By J. De Pree, M.D.
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IN RECENT years anesthesia has developed into a most important branch of medicine. Surgery was the first and still is anesthesia's chief field. Here it has accomplished much for the benefit of both patient and surgeon. The work of the surgeon is rendered easier because of greater relaxation and quieter abdominal fields. The patient is safer because the actions of the drugs used are better understood and, therefore, they are used to greater advantage. The surgeon has been relieved of worrying about the condition of the patient and can concentrate upon the work in hand.

Some of the responsibility carried by the anesthesiologist has been thrust upon him, but much of it he has quietly and efficiently assumed because it had evolved upon him with the development of his specialty.

New drugs and new techniques are constantly being developed. The latest development in surgical procedures, such as the operation for patent ductus arteriosus, could not have been perfected without the adoption of anesthesiological techniques for it. Anesthesiology has gone ahead so far and developed so greatly that special training is absolutely necessary. Surgeons are demanding qualified anesthetists. They realize that they can keep up only in a general way with the advances in anesthesiology.

The relief of pain has always been of paramount interest. Articles in lay magazines about painless childbirth, anesthesia, et cetera, are read with interest. The result is that patients know about anesthesia and demand the best and least unpleasant of anesthetics. They are beginning to doubt the surgeon who does not use the services of a qualified anesthesiologist. The patients in every community which has a hospital are entitled to and should receive a real anesthesia service.

The phrase "anesthesia service" is deliberately used because the term anesthesia, or as we prefer—anesthesiology, means more than the mere administration of an anesthetic drug. This service starts the day before, or several days before, the day of surgery. We obtain the patient's history of

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past and present illness, previous operations and anesthesias. Their reactions or complications are carefully evaluated. A careful examination, particularly of the respiratory and the cardio-vascular systems, is done. In critical cases the surgeon consults us several days before surgery and we follow the patient's course closely and interestedly. The cases are thoughtfully evaluated. The type of anesthetic for each individual case is decided upon by taking into consideration the patient's condition, the pathology, the operation and the needs of the surgeon as to position on the operating table, degree of relaxation needed, and the length of the time required by the surgeon. The patient's desires are respected as far as possible. It is surprising how far we can go today in this respect. If the responses we receive to our visits and examination mean anything, the patients are indeed grateful for this service. They appreciate our interest and are thankful that their surgeon was interested enough to have the anesthesiologist see them before the operation. These pre-operative visits are a great morale builder and leave many patients with a profound sense of relief. The patient knows the anesthetist who is going to put her to sleep and is confident instead of fearful.

The metabolic rate of the patient determines the resistance to the anesthesia. This metabolic rate is influenced by fever, pain, and the emotional state. It is necessary to lower this rate before anesthesia is started. This is done by the use of sedatives and narcotics. Pre-operative pre-medication is essential. Too much causes more trouble than not enough and may produce a serious respiratory depression.

The administration of the anesthetic should be started in a quiet, efficient and reassuring manner. It should be started slowly. The rate of administration is increased as the patient tolerates the drug. As the patient goes down through the first and second stages the concentration becomes high. Finally the patient is in the proper plane of anesthesia. The anesthetic concentration can now be decreased and only enough anesthetic given to keep the patient in the desired plane.

During the operation, the patient's condition is watched carefully and constantly. This condition is revealed by the blood pressure, pulse, respiratory rate, sweating and color. Changes in any of these are noted, and danger signs are carefully watched for and proper remedies immediately instituted.

The accidents of anesthesia are circulatory and respiratory. These accidents will result in death if

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not promptly recognized and corrected. The circulatory conditions are due to increased blood pressure, decreased blood pressure, and ventricular fibrillation. Asphyxia is the greatest source of trouble to the anesthetist. When it is accompanied by cyanosis, it is readily recognized. In the anemic, however, cyanosis is absent and anoxia, or lack of oxygen, may not be detected until great damage has been done. Only a few minutes suffice to cause irreversible changes in the central nervous system. Increased blood pressure may indicate asphyxia.

Decreased blood pressure is usually due to hemorrhage or shock. Here increase in oxygen intake is indicated. Fluids, preferably blood, should be given intravenously. Blood substitutes should be given only until blood is available. During every operation intravenous fluids, 5 per cent glucose in water, should be given. The loss of blood is anticipated and is replaced immediately.

A fall in blood pressure in the third stage of anesthesia may be due to anesthetic shock which is corrected by increasing the oxygen percentage of the anesthetic mixture. When the decrease in blood pressure is not due to hemorrhage, a pressor drug, such as neosynephrin, may be used cautiously. These are best given in small doses and repeated as indicated.

Ventricular fibrillation is a sudden stopping of the circulation with purposeless contractions of the ventricular muscle. Recovery or death results in a minute or two. This accident calls for immediate artificial respiration with oxygen and intermittent pressure on the rebreathing bag. Manual cardiac massage should be promptly instituted.

Respiratory accidents are peripheral and central. The peripheral accidents are obstruction due to foreign bodies, vomitus, etc., swallowing the tongue or spasms—bronchiolar or laryngeal. For obstruction the proper measures are aspiration of vomitus, mucus, etc.; removal of foreign body; and insertion of a proper airway. Vomiting should be prevented by emptying the stomach if necessary, before anesthesia; and by careful induction. The great danger is aspiration of vomitus and the production of a diffuse chemical pneumonitis.

The bronchiolar and laryngeal spasms may usually be prevented by proper pre-medication—atropine or scopolamine. After they have developed, the treatment is attempting to force oxygen into the lungs to prevent anoxia. As the anesthesia lightens the spasm usually is broken.

Central respiratory accidents are failure of the respiratory center. These are caused by incorrect pre-medications, and by too deep anesthesia. The remedy is artificial respiration and introduction of corrective medication.

Postoperatively, the patient is visited daily and examined, as necessary, for the first few days. His subsequent course in the hospital is followed by means of the chart and occasional visits. This post-operative regime adds much to the patient's comfort and often nips a complication in the bud. We insist, whenever possible, that the patient get up out of bed and cough. When a chest shows signs of collecting moisture the patient is rolled on his side and his back is thumped while he coughs. This brings up copious mucus. When necessary, bronchoscopic aspiration is done and many lung complications are cured before they start.

The different anesthetic drugs and types of administration have not been mentioned. Many anesthetists are of necessity confined to the use of ether or chloroform. Some few may also be giving nitrous oxide. Nitrous oxide, however, as well as all the newer anesthetics, will require special equipment and should not be given without special training.

Ether is the anesthetic drug most commonly used today, by the specialist in anesthesiology as well as by the general practitioner. It is 100 per cent potent and has the widest margin of safety of any of our anesthetics. No one need be ashamed of using ether. Unfortunately, its use is not pleasant to the patient. The sense of smothering and the nausea and vomiting postoperatively are too unpleasant. These, however, can be minimized by careful administration. Induction can be accomplished rapidly by using vinethene (divinyl-ether) with the open mask until the patient tolerates ether. Shortly after ether is started, the mask can be partially closed by means of a folded wet towel around the lower part of the mask.

Vinethene should be given slowly and only for a short time. When used for the complete anesthetic, it should not be used for more than twenty or thirty minutes. It works rapidly but has the disadvantage of causing excessive salivation. Occasionally, we have noticed slight convulsions with its use.

Unfortunately, some physicians must operate, or at least deliver a mother in her home. These homes probably are illuminated by oil or gasoline lamps and heated by coal or wood stoves. Here,

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ether and other explosive and inflammable anesthetics cannot be used. Chloroform must be substituted. Chloroform is not a safe anesthetic. It causes death in the induction period as well as later by direct action upon the heart. Death may be caused days later by delayed chloroform poisoning. When chloroform is to be given, it must be given slowly and never in strong concentration.

Between the fields where chloroform and ether are the only anesthetics used and the larger medical centers where the highly trained specialists are working, there are the fields where the large majority of the members here today are practicing. You have a hospital to which your patients can be brought for operations or delivery. These patients are your best friends. You cannot let them down by not giving them the best. You are responsible that they get the benefit of the best—in surgery and also in anesthesia.

The newer anesthetics should never be given by anyone not trained in their use. Nitrous oxide, one of our oldest and safest anesthetics, can get an untrained person into trouble faster than he may realize. Pentothal sodium is one of the most pleasant anesthetic drugs we have. It has removed the fear of surgery from every woman who has received it, and patients having heard another describe it, request it. No doctor has the right to use any drug unless he knows how to use it. This is especially true with anesthetic drugs, and pentothal sodium is no exception.

Curare is not an anesthetic drug but is used by anesthesiologists to produce relaxation. By means of this drug, sufficient muscular relaxation can be obtained without pushing the anesthesia to the limit. If pushed too far, curare will paralyze the muscles of respiration; the intercostals are affected first, and finally the diaphragm. This causes death by asphyxiation. The heart is not affected, and the patient can be kept alive if the anesthetist breathes for him by means of artificial respiration. Prostigmine, intravenously, is antagonistic to the action of curare and very beneficial in overdosage.

Spinal anesthesias are not nearly so numerous in our practice as they were four or five years ago. They have been superseded by pentothal sodium and nitrous oxide with the help of curare to produce sufficient relaxation.

The anesthesiologist is frequently called upon to perform a saddle block for a patient in labor. It is a great boon for the long, difficult labors, and for malposition and other operative deliveries. The

zone of anesthesia must not be higher than D10—about halfway between the symphysis and the umbilicus.

Not only is anesthesia invaluable to the surgeon and obstetrician, but it is rapidly proving a great aid to the internist. More and more is the anesthesiologist called upon to perform therapeutic and diagnostic blocks of various kinds.

Intercostal blocks for postoperative pain; cervico-thoracic sympathetic blocks, lumbar sympathetic blocks and paravertebral blocks are among the most frequently requested.

No attempt has been made to go into detail about any anesthetic or technique. It would be presumptuous to attempt to teach you by means of a paper the intricacies of any type of anesthesia or nerve block. An attempt has been made to describe the art of anesthesiology, and how it would be of benefit to every community. Not all anesthesiologists can confine their practice 100 per cent to anesthesiology. This is not necessary and the smaller communities would be greatly benefited by qualified part-time men.

The pouring of ether or chloroform is about the least part of anesthesia. The maintenance of the proper balance of anesthetic drug, oxygen, and carbon-dioxide is of paramount importance. The knowledge of the action of his drugs, the co-operation with the surgeon in giving him the proper relaxation, and bringing the patient safely through his operation by the correct interpretation of the revealing signs is the art of the anesthesiologist.

1810 Wealthy St., S.E.

MSMS

Ellington X. Zilch, a captain in the First World War, came out of the service with the idea of getting into business for himself and making good. He had gone to high school and business college and everybody said he was a fine young man because he worked very hard, satisfied his customers, saved his money and put his profits back into his enterprise.

He was too busy keeping his business going to think much about politics at the time. But, after the New Deal came into power, his family noticed that he acted strange at times, insisting that he could not think right.

He wanted to know why the Roosevelt Administration was burning crops and killing off pigs if people were hungry. They explained to him that was done to create a scarcity so that prices would rise and then everybody would have plenty to eat.—*Detroit Free Press*.

Impending Death under Anesthesia

By Max Thorek, M.D.
Chicago, Illinois

UNLESS circulation is restored, with supply of oxygen to the brain within three or four minutes at most, irreparable damage to the higher cerebral centers is inevitable. Even if the patient does not die, he may become demented, paralyzed or blind. Therefore the selection of the anesthetic, skill of the anesthetist, and the knowledge, competence and decision of the operating surgeon are keynotes to success.

The introduction of spinal anesthesia, despite its undeniable advantages, involves risk of cardiac arrest. Varying figures are given by different authorities as to mortality rate among patients with spinal anesthesia. Sise gives it at 1 to 100; Babcock at 1 in 10,000. Probably the truth lies somewhere between the two extremes.

Death's greatest incidence is in aged persons, persons rated as "poor operative risks" and Negroes. For young, healthy persons this type of anesthesia apparently presents no greater hazard than any other.

Inadequate, indecisive and retarded action by the surgeon has already caused the death of too many patients. Only by being always in readiness, having at hand the necessary instruments and supplies, and by making oneself familiar with the needful procedures through previous rehearsal can the number of fatal terminations be reduced to a reasonable figure.

Cardiac and respiratory arrest may be (1) reflex, due to vagovagal stimulation; (2) traumatic, due to injury of the heart or pericardium during operation; (3) the result of functional abnormality, e.g., ventricular fibrillation due to an oversupply of epinephrine, whether this is injected or oversecreted by the adrenal glands, or (4) induced by faulty selection of an anesthetic or an overdose of any such agent.

The principal signs and symptoms of cardiac arrest are (1) stoppage of breathing, (2) disappearance of pulse beat, blood pressure and cardiac sounds, (3) absence of bleeding in the operative wound, and (4) pallor or cyanosis. If

anoxia is far enough advanced, the pupils may be dilated. The stoppage of respiration is usually the initial symptom.

As a prophylactic measure to prevent overstimulation of the vagus nerves, atropinization or blocking of the afferent stimuli by means of a local infiltration anesthetic has been suggested. For cardiac arrhythmia caused by trauma near the pulmonary hilus, 10 c.c. of 1 per cent procaine hydrochloride solution, administered intravenously, is recommended by some surgeons. Some doubt does exist as to the advisability of applying procaine directly to the heart.

In cardiac arrest, speed is the first and greatest requisite of success. The first step is to answer the question: Has the heart actually ceased to beat?

If cavities are not open, opening of thorax is fully justified. Time is all important; diagnosis must be made quickly. If the heart has actually stopped or is fibrillating, institute cardiac massage instantly. If pulse is merely reduced to extremity of weakness, little harm has been done.

For diagnosis without direct visualization of the heart itself, prick the auricle first. This can be accomplished in the "twinkling of an eye" by thrusting a needle into the third right costal interspace at the upper rim of the fourth rib, close to the sternal border. Direct needle upward. If this fails, cardiac massage should be instituted at once.

Sir Leonard Hill has pointed out: "The cortex can be kept from death by the merest trickle of blood." Resort to some form of artificial respiration. (Artificial respiration should always be discontinued while an incision is being made, to avoid serious trauma.)

"Blue asphyxia" is chiefly respiratory; first essentials in its treatment are to clear the airway, pull the tongue forward, administer oxygen, remove any impaction of the epiglottis with finger.

Give artificial respiration directly or indirectly. Indirect method is rhythmic pressure on lower thorax. If ineffective, discontinue after one minute. Resort to Silvester's artificial respiration systematically and symmetrically.

Direct artificial respiration (transpiration) may be induced by the "Elisha method" ("and he put his mouth against his mouth"). A piece of gauze is placed over the patient's mouth and gently blown through, with patient's nose pinched and his chin pulled forward. This should be repeated

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every four or five seconds until normal, rhythmic respiration is restored. Automatic artificial respiration is most effectively achieved by means of intratracheal tube. Other possibilities are (a) use of modern anesthetic machine to supply a high percentage of oxygen and (b) injection of alphalobeline. Stretching of the anal sphincter should be done only when anesthesia is light and the patient "refuses to breathe" but has full, bounding pulse. It has a distinct but limited field of usefulness.

Aspiration of vomited material is serious if not attended to at once. Hamilton Bailey says, "A patient who inspires vomitus always dies; not necessarily at the time, but later, from bronchial pneumonia." Under these conditions employ the following measures: (a) use force of gravity by tilting the whole table; (b) direct aspiration of fluid from pharynx by laryngoscope method; (c) when urgently indicated, aspiration through laryngotomy or tracheotomy. This last may be a lifesaving measure in some cases. These measures should be adequate to overcome "blue asphyxia" in most cases.

"White asphyxia" is of truly cardiac origin. Danger therefore is far greater. Cardiac massage must be resorted to at once. The standard method of cardiac massage is to open the upper part of abdomen in the midline from xiphisternum, large enough to admit the right hand. With the heel of the left hand pressing downward from the outside, the fingers of the right hand can exert effective pressure on the ventricles through the diaphragm. For approximately thirty seconds these intermittent movements should be quick and strong. A single contraction of the heart should never be considered a victory. All too often it is not followed by another contraction unless the surgeon continues his efforts without ceasing. A few more compressions, however, will usually suffice to induce continuous automatic action of the heart.

Nicholson's method differs from standard methods chiefly, in that a buttonhole incision is made immediately in the diaphragm behind the xiphisternum. The surgeon's thumb is passed through the opening, and massage accomplished by compressing the ventricles in much the same manner as one would squeeze the bulb of an atomizer.

Lampson's intercostal approach consists of an incision in the fifth intercostal space, opening directly into the pleural cavity. First two fingers of

the surgeon's left hand are inserted and massage is performed by compressing the ventricles against the sternum at a rate of about one compression per second.

Ether convulsions may be due to (1) overheating, (2) overoxygenation and cerebral congestion, (3) action of certain streptococci (organisms isolated by the Mayo group from throats of patients with ether convulsions have been proved capable of causing convulsive seizures in experimental animals). Treatment: (a) carbon dioxide and oxygen inhalations, to be continued even after convulsions have ceased; (b) prompt intravenous injection of sodium pentothal (3 to 5 c.c.); (c) injection of lobeline (Bailey), and (d) lifting of the patient to a sitting position before pentothal is given (A. Smith).

Collapse of the patient under intravenous anesthesia: Antidote: intravenous injection of solution of picrotoxin 1/1,000 (1 mg. of picrotoxin acts as an antidote for 30 to 40 mg. of pentothal).

Collapse of patient under spinal anesthesia: Place in steep Trendelenberg position. Raise blood pressure (methedrine).

The innervation of the heart and pericardium is of utmost importance in this connection. The nerves of the pericardium include fibres from the phrenic nerves, especially the left one, also probably from the cardiac plexus. The return of regular sinus rhythm in a case described by Touroff and Adelman occurred suddenly on clamping and traction of the pericardium. This, in their opinion, was not coincidental or fortuitous, but indicative of a possibility that these processes provided some potent stimulating reflex that induced prompt cardiac action. The nature and pathway of this reflex merely can be assumed. Coffey and his co-workers have described a pathway from the pericardium via the phrenic nerve to the superior sympathetic cervical ganglion, and it is possible that a powerful stimulus, traversing this pathway, served to initiate cardiac action. It is not at all unlikely that the opening of the pericardium in my case similarly initiated cardiac function through reflex stimulation.

In fibrillation, cardiac massage *per se* will not only fail to correct the condition but may actually aggravate it. Beck and his associates use an electrical device to shock and defibrillate the heart. Procaine hydrochloride has been advised as an adjuvant to electrical defibrillation. Mautz showed

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that the intravenous use of procaine hydrochloride, combined with electrical shock, restored a co-ordinated beat in practically all experimental animals with ventricular fibrillation, whereas electrical shock alone was successful in only half the animals. It is recommended, therefore, that in the absence of a defibrillating apparatus procaine hydrochloride and cardiac massage be employed in combination, the former by intra-auricular injection.

The prognosis of cardiac and respiratory arrest is uncertain.

Report of Case

A married woman, aged twenty-three, was admitted to my service at the American Hospital for chronic appendicitis. She underwent operation on June 25, 1948. Prior to the administration of an anesthetic, her blood pressure in millimeters of mercury was 120 systolic and 80 diastolic. Premedication included the administration of 1½ gr. of nembutal two hours before operation and ¼ gr. of morphine sulphate with 1/200 gr. of scopolamine one hour later. Except for the appendicitis, the patient showed no evidence of organic disease.

Spinal anesthesia was employed, 14 mg. of pontocaine with 1 c.c. of 10 per cent dextrose solution being injected into the subarachnoid space at the level of the third and fourth lumbar segments. The anesthesia reached the level of the eighth thoracic segment (the anesthetist stated afterward that it could not have risen above this level).

On the table, the patient appeared apprehensive and was restless and unco-operative. Pentothal sodium in a 0.4 per cent solution was started intravenously in the ankle vein, beginning not less than ten minutes after administration of the spinal anesthetic. (The routine procedure in this hospital is to give just enough pentothal to keep the patient asleep; the drug is not used to supplement the anesthetic. If spinal anesthesia proves inadequate, nitrous oxide or cyclopropane is used as a supplement.) A total amount of 0.35 gr. of pentothal was administered by the continuous drip method over a period of three to five minutes. During this time, the blood pressure was 100 systolic and 60 diastolic; one minute later, these values dropped to 60 and 0 respectively. The pentothal was discontinued and the blood pressure checked again; it showed 40 systolic and 0 diastolic. In another half minute the systolic pressure had also disappeared.

The patient was still breathing shallowly but with apparently fair exchange. Her face was livid, and no carotid pulse could be felt.

Administration of pure oxygen by mask was started at once. The drapes were removed (the operation had not yet been started), and a check was made for the aortic pulse, without result. I immediately made a left superior rectus incision, opened the diaphragm and began cardiac massage. At the same time I ordered an intracardiac injection of epinephrine (0.5 c.c., 1/10,000). Massage had been continued for between five and six minutes before the heart resumed spontaneous activity. During

this time the patient, whose respirations had now also ceased, was intubated, and artificial respiration with pure oxygen was begun. Five per cent dextrose in water was started in the foot and set to run as rapidly as possible. When the heart action was firmly re-established, appendectomy was carried out through the incision already made. (Total time of cardiac arrest was nineteen minutes.)

After the operation, the patient remained in deep coma for four days. There was no response to noxious stimuli. The patient's pupils were dilated and fixed. A classic Magnus-de Kline phenomenon was present, and there was also a continuous bilateral Babinski sign. On the day of the operation, one gained the impression of cortical degeneration secondary to cerebral anoxia. A bilateral stellate block was performed and was repeated on each of the two following days.

On the first postoperative day, a spinal puncture was performed, yielding clear, normal fluid under a pressure of 280. At this time, the coma seemed even deeper. The pupils were smaller, and the Magnus-de Kline phenomenon was absent.

On June 28, though still in coma and not responsive to stimuli, the patient did not seem quite so oblivious as before. The eyes were open, with the pupils wide, round, equal and reactive to light. The fundi were normal. There was no sucking reflex. The head could be moved freely; no stiffness of the neck was observed. The arms and legs were held in an extended position. Occasionally, the legs stiffened and the feet went into a tonic equinovarus position. Deep reflexes were present in all four extremities. There were no pathologic reflexes in the arms, but a Babinski sign could easily be elicited on either side, though it was more marked on the right.

On June 29, the patient's condition grew worse. She was very weak and pale. Her lips were cyanotic and her respirations shallow. She vomited repeatedly.

However, on the next day, June 30, her sensorium was slightly clearer. She responded to her name by opening her eyes and trying to fix them upon the examiner, but her gaze was extremely tired and distant. The hypertonicity of the extremities had disappeared. There was no increase in the deep reflexes, but the Babinski sign was still marked on both sides.

On July 2, there was a definite if slight improvement in her general condition. She was less lethargic and seemed to understand simple orders. She could follow an object with her eyes in all directions, and there was no nystagmus. She protruded her tongue normally at command. She could move her arms and legs voluntarily, though feebly; the left arm wavered. She also made efforts to raise her body. She was still unable to speak or to repeat vocal sounds. All the deep reflexes were markedly decreased, but the bilateral Babinski sign was still present.

On July 3 and 4, her condition continued to improve. She regained full consciousness, appeared to understand what was said to her and smiled on appropriate occasions. Motor weakness was still marked in the extremities. The reflexes were unchanged.

By July 9, motor power in the legs had improved considerably, but the arms were still very weak. The finger-

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nose test revealed definite disturbance in co-ordination on the left side. She was still unable to talk, but for the first time succeeded in repeating some vowel sounds and a few simple, one-syllable words in a low, tired voice. By July 12, she was able to utter complete, correct sentences, though her speech was still far from normal (scanning, slurred and indistinct).

July 14 found her able to walk with assistance, though her gait was staggering and insecure and she kept her gaze on the ground. Babinski and Gonda signs were marked on the left side but had become less pronounced on the right.

From this time on, the patient's progress was steady. Her gait improved; she could use her arms better, though both arms and hands were still very weak. There was bilateral adiadochokinesis, and both the finger-nose test and the heel-knee test gave faulty results. Her articulation improved very slowly. Amnesia was present, dating from the morning of her admission to the hospital; her most recent memory was of having been in her doctor's office, and even this she remembered only as a fact, being unable to recall the scene. Her handwriting remained extremely shaky, and she was unable to write anything but single letters. On the other hand, she solved simple arithmetic problems promptly and accurately. The Babinski sign disappeared from the right side.

On July 27, the patient's condition was so much further improved that her discharge from the hospital was considered. She was able to walk alone and was steadily gaining in strength. The objective neurologic signs were approximately the same, but the deep reflexes were more nearly normal and the Babinski sign on the left was now equivocal. On discharge from the hospital, her mental condition was still somewhat befogged and her speech still hesitant, but thereafter improvement was constant. By November, the finer movements of the extremities were completely restored, and her speech was practically normal. She was then two and a half months pregnant, her gestation proceeding without untoward manifestations of any kind.

During the course of her pregnancy, gestation was perfectly normal. Her delivery was normal. No anesthetic was used. The child was male, and was healthy.

Comment

There is mounting evidence that cardiac and respiratory arrest under anesthesia is amenable to control under proper conditions and with adequate technical skill. Recent contributions covering either case reports or physiologic and technical studies, or both, have been made by Lampson, Bailey, Adriani, Dripps and his associates, Kirgis and Reed, McLeod and Schnipelsky, Nicholson and Ruzicko, Thompson and his associates, and Davis.

Charlewood in 1948 reported a case in which he introduced a modification of the standard technique for cardiac massage. His patient did not recover, but he expressed the opinion that this

modification, since it did produce temporary pulsation when regular massage had failed, may have its uses. It consists of stroking the heart firmly downward with two fingers, thus imitating the path of the normal impulses passing down the bundle of His.

Stage in 1949 reported three cases of cardiac arrest, one of them in detail. Two of the patients died; the third recovered. Stage regards the anesthetist as responsible for the diagnosis and emphasizes the importance of having suitable equipment, including endotracheal apparatus, always at hand.

The duration of the period of arrest after which the patient may recover remains an open question. Touroff and Adelman recently (1949) reported a case in which the patient was resuscitated and recovered fully after an arrest lasting forty minutes. They expressed the opinion that cardiac massage is the prime factor in maintaining life until spontaneous heart action is restored. In proof of its importance they cite Gunn, who has shown experimentally that a dye injected into the right ventricle during arrest will appear in the lungs and in the carotid artery with only a few compressions of the heart. They refer to the work of Dripps and his co-workers, who stated that cardiac massage skillfully performed can produce a systolic blood pressure of 60 to 70 mm. of mercury.

This is sufficient to demonstrate the importance of cardiac massage, for, as Touroff and Adelman have pointed out, it indicates the possibility that cerebral circulation can be thus maintained, warding off irreversible cerebral damage due to anoxia or reducing it to a minimum. The importance of early massage cannot be overemphasized, for only by such prompt treatment may one hope to combat the damaging effects of hypoxia on the central nervous system. The first five or six minutes are critical (Weinberger); after that interval, irreparable cortical and medullary changes will appear. Delay of more than five minutes in starting massage is hazardous (Bailey and Nicholson). "Procrastination," say Touroff and Adelman, "constitutes a serious error in the management of these emergencies. In our case, we were fortunate in having the heart under direct observation at all times, so that no moments were lost. . . . The sequence of events thereafter indicates clearly the effectiveness of cardiac massage, and we attribute the successful resuscitation of our patient primarily to the latter."

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Second in importance to cardiac massage is artificial respiration, which implies "rhythmic insufflation of the lungs, preferably through an endotracheal tube, at the rate of 24 per minute and at pressure not exceeding 15 mm. of mercury." Artificial respiration has a twofold function: to oxygenate the blood in the pulmonary vessels and to aid in maintaining the general circulation.

A case of complete recovery after cardiac arrest of twenty minutes' duration was reported by Adams and Hand in 1942. Studies and experiences in this and related fields have been contributed by the following authors, among others: Weeks and Van Hoy, Volpitto and his co-workers; Barber and Madden; Prevost and Battelli; Eastman and his collaborators and Fauteux.

Summary

1. The arrest of cardiac and respiratory action is a complication—fortunately a rare one—of the administration of anesthesia, particularly spinal anesthesia.
2. The constantly and rapidly increasing employment of spinal anesthesia makes it imperative for all who operate on patients under its influence to be prepared to deal with this gravest of all complications should it arise. An emergency outfit should always be at hand, and a prior rehearsal of the entire operating team should make each member familiar with his part in preventing a fatal outcome.

3. When the abdominal or the thoracic cavity has already been opened, the surgeon can reach the heart directly. If no such opening exists, he is justified in opening the thorax and, if he finds the heart stopped or fibrillating, he should begin cardiac massage without an instant's delay. Speed is the indispensable requisite of any procedure dealing with cardiac arrest.

4. Three methods of cardiac massage are described—the standard method, the method of Nicholson and the intercostal approach recommended by Lampson. The third method is useful in the treatment of ventricular fibrillation when complete cardiac arrest has not occurred.

5. Other anesthetic complications, such as ether convulsions and collapse of the patient under intravenous or spinal anesthesia, are discussed.

6. The case is reported of a young woman about to be operated on for chronic appendicitis under spinal anesthesia (pontocaine) with intravenous pentothal sodium injection beginning ten

minutes after injection of the spinal anesthetic. Within seven minutes the blood pressure fell to zero and no carotid pulse could be felt. The diaphragm was opened through a left superior rectus incision and cardiac massage instituted, accompanied by intracardiac injections of epinephrine. These were continued for more than five minutes, after which the heart resumed its beat. Cardiac action was arrested for nineteen minutes from the time the last pulse beat was felt until heart resumed its action. Appendectomy was then performed through the original incision, while the patient remained in deep coma. The coma persisted for four successive days, and observers gained an impression of cortical degeneration secondary to cerebral anoxia. On the sixth day the coma lightened; there was some response to stimuli, and the sensorium was slightly clearer. General improvement continued thereafter, permitting the patient's discharge at the end of a month. She later gave birth to a healthy male child.

7. The importance of reflex action through the pathway from the pericardium via the phrenic nerve to the superior sympathetic cervical ganglion is emphasized.

MSMS

I lament that I find in me no enthusiasm, no resources for the instruction and guidance of the people, when they shall discover that their present guides are blind. This convention of Education is cold, but I should perhaps affect a hope I do not feel, if I were bidden to counsel it. I hate preaching, whether in pulpits or in teachers' meetings. Preaching is a pledge, and I wish to say what I think and feel today, with the proviso that tomorrow perhaps I shall contradict it all. Freedom boundless I wish. I will not pledge myself not to drink wine, not to drink ink, not to lie, and not to commit adultery, lest I hanker tomorrow to do these very things by reason of my having tied my hands. Besides, man is so poor he cannot afford to part with any advantages, or bereave himself of the functions even of one hair. I do not like to speak to the Peace Society, if so I am to restrain me in so extreme a privilege as the use of the sword and bullet. For the peace of the man who has forsaken the use of the bullet seems to me not quite peace, but a canting impotence; but with knife and pistol in my hands, if I, from greater bravery and honor, cast them aside, then I know the glory of peace.

It was a fine corollary of Stoicism that Aristotle said that the honor of chastity consisted in self-sufficiency.—EMERSON.

Ophthalmia Neonatorum

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THE DISEASE known as ophthalmia neonatorum, or inflammation of the eyes of the newborn, is caused by certain bacteria which find entrance into the eyes of babies at birth or shortly thereafter. The bacteria most often demonstrated by smear and culture are gonococci (in 30 to 60 per cent of the cases) streptococci viridans, staphylococci and both Gram-negative and Gram-positive organisms of various kinds. The infection causes acute inflammation of the conjunctiva with marked swelling of the eyelids, blennorrhea and corneal ulceration which destroys the sight unless treatment can be instituted within a few hours of its appearance.

Crede, in 1881, showed that the routine application of 1 per cent silver nitrate solution would eliminate ophthalmia neonatorum. Dr. Lucian Howe of Buffalo, New York, in 1887, called the attention of the New York State Medical Society to contagious ophthalmia, and through his efforts the New York State Legislature passed a bill in 1890 requiring midwives to report cases of ophthalmia neonatorum to their local health officers. Other states soon passed similar laws, but this infection continued to make babies blind. As late as 1906-1907 ophthalmia neonatorum was responsible for 28.2 per cent of new admissions to schools for the blind.

In 1908, the New York State Committee for the Prevention of Blindness was formed. In 1915, it became the National Committee and ultimately was renamed the National Society for the Prevention of Blindness. This society immediately set about to lessen the number of cases of ophthalmia neonatorum by urging the use of the Crede method of prophylaxis.

Prior to the inauguration of the campaign sponsored by the New York State Committee for the Prevention of Blindness against ophthalmia neonatorum in 1906-1907, of all those who were admitted to schools for the blind, 28.2 per cent had lost their sight from this cause alone. Real achievement has been accomplished over the years with a

reduction to 2.9 per cent among new admissions to schools for the blind in 1945-1946. During 1947, nearly 1,200 cases of ophthalmia neonatorum were reported in the United States compared to a median of 1,627 for the years 1942-1946. Despite the reduction from 28.2 per cent to 2.9 per cent, much remains to be done besides distributing ampules of silver nitrate and enforcing the law. Each case of ophthalmia neonatorum should be investigated to ascertain why it occurred. Only by information thus obtained may we judge the need of revision of existing regulations or additional control procedures. In a recently made nation-wide survey, it was shown that there was a delay of one week or longer in reporting to the health officer 21 per cent of the cases, and there was no information on outcome as regards vision in 2,002 out of a total of 3,000 cases. In New York City, for the five-year period 1931 to 1936, only twenty-three cases of ophthalmia neonatorum were reported to the department of health. An investigation of 192,478 births during this period revealed that there were actually 1,344 clinical cases of ophthalmia neonatorum, among which 141 were proved to be gonorrhreal.

It is of interest to note that in Minnesota, in 1941, infectious diseases were the etiologic cause in 31 per cent of the total causes of blindness among recipients of aid. Ophthalmia neonatorum accounted for 4.7 per cent. In the State of Michigan, the cases of ophthalmia neonatorum reported to the State Department of Health have shown a decrease from seventy-eight in 1944 to twenty in 1949. However, in 1943 only five cases were reported. The exact incidence of ophthalmia neonatorum can hardly be estimated on the basis of reported cases, but it is quite likely that all severe cases of gonorrhreal ophthalmia neonatorum are reported to local health authorities.

The earliest efforts of the National Society for the Prevention of Blindness were directed toward the adoption of the Crede method of prophylaxis against a disease of infectious origin that was causing the blindness of thousands of babies in this country each year. Medical societies were implored to urge that all babies wherever delivered, whether by physician or midwife, be protected against the probability of blindness by having the eyes carefully cleansed and a single drop of a freshly prepared 1 per cent of silver nitrate

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dropped into the conjunctival cul-de-sac. The solution of silver nitrate is prepared under the auspices of the state departments of health and supplied in wax ampules for use by physicians and midwives in all deliveries. In some states, laws were enacted making compulsory the use by physicians and midwives of some accepted form of prophylaxis and placing gonorrhreal ophthalmia on the list of reportable diseases. Wisconsin, in 1909, was the first state to require prophylactic use of silver nitrate in both eyes of *all* newborn babies. Some form of regulation is now required in all states either by law or by the state board of health, although the regulation unfortunately is often weakened by various restrictions. To the practice of the Crede method of prophylaxis may be accredited the great decrease in the number of reportable cases of ophthalmia neonatorum and also the decrease in the blindness that occurred among those few in whom the disease was started but immediately treated according to the accepted method. There has been no doubt that the incidence of reportable cases of gonorrhreal ophthalmia could have been made lower still if the use of the solution of silver nitrate could have been more completely adopted, but unfortunately there were those, both physicians and midwives, who refused to use it or who thought that in certain cases its use was not indicated because there was no gonorrhea in the mother at the time of birth.

While it is recognized that the greater number of severely infected corneal ulcers of babies that lead to blindness have been due to gonococci there remains a goodly number (40 per cent) of the total that carried infection by streptococci, staphylococci, and a host of other organisms that might have been killed or rendered harmless by a single instillation of a 1 per cent solution of silver nitrate, but because their presence was not known or was regarded as harmless many babies were not given the advantage of prophylaxis and consequently became blind.

Silver nitrate in one per cent solution is known to be harmless to the delicate tissues of the eye and at the same time known to be lethal to the organisms that gain entrance to the babies' eyes at the time of birth. The instillation of the solution usually causes a mild irritation of the conjunctiva with increased mucoid secretion, but after a day or two at most these symptoms subside. It

has often been observed that the same symptoms are present and sometimes last for several weeks in cases where no prophylactic or antiseptic has been used. The offending organisms often are difficult to demonstrate by smear or culture, and the inflammation may persist in spite of treatment. These are exceptions to the rule but do not constitute a reasonable objection to the use of silver nitrate, inasmuch as it is known to be harmless when properly used. However, there has been maintained a subtle endeavor to minimize the urgency of ophthalmia neonatorum prophylaxis. In some quarters a definite antagonism to the employment of silver nitrate solution has arisen on the grounds that in some cases it has been found to be ineffectual and in others definitely harmful. Attention has been directed to reports of accidental injury to the eyes of babies by instillation of a solution made too strong and by instillation of other drugs by mistake. Such accidents were reported mostly from the maternity wards of large hospitals and reflect more the lax supervision of the staff than the value of the treatment when properly given. Many large hospitals report hundreds of successive births with proper application of the Crede method of prophylaxis without the occurrence of a single case of gonorrhreal ophthalmia and not a single case of harm to the eye by instillation of silver nitrate.

For many years, until the discovery of the anti-septic properties of the sulfonamides, about 1935, silver nitrate was the only prophylactic agent widely used. In spite of the fact that the Crede method of prophylaxis was not universally used, the incidence of blindness due to ophthalmia neonatorum steadily declined as the prophylactic measures became more widely adopted throughout the United States, and the treatment of gonorrhreal ophthalmia has been markedly improved by the use of sulfonamides and antibiotics.

With the introduction of the sulfonamides, new drugs for the treatment of gonorrhea were found, drugs that were bacteriostatic rather than bactericidal. They were found to be quite effective in the treatment of gonorrhreal ophthalmia and were advocated as prophylactic agents. That there was great merit in the use of the drugs was easily demonstrated and widely accepted, but limitations were soon discovered. One after another of the sulfa drugs were tried, and most of them were found to be effective in the treat-

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ment of ophthalmia neonatorum due to some bacteria and not so effective in others. The drugs exhibited a selective affinity for Gram-negative or Gram-positive organisms, some of which developed a tolerance to the drug, and repeated applications were required to keep the infection under control. The use of antibiotics in the mother some days before delivery was considered effective treatment of her infection and at the same time provided sufficient prophylaxis for the baby. Careful and adequate prenatal treatment undoubtedly has reduced the incidence of venereal disease among the mothers and aided in the prevention of ophthalmia neonatorum of all etiological sources. By some obstetricians the use of antibiotics has superseded the instillation of silver nitrate solution and the use of sulfa compounds shows even more favorable results. In ophthalmological circles, it has been suggested that the use of the Crede method of prophylaxis be abandoned and that state laws requiring the use of silver nitrate solution as a prophylactic agent be changed to permit the use of any other prophylactic agent selected by the person in charge of the delivery. There are two points of importance in this suggestion: first, the alleged damage to the delicate structures of the eye by silver nitrate, and second, the assumption that some other drug will be equally or more effective as a prophylactic agent, as practical from the standpoint of distribution to physicians, nurses and midwives, and less likely to do harm to the eyes.

First, consider the charges of damage to eyes by use of silver nitrate. In the literature on the subject of ophthalmia neonatorum, instances of opacities with severe burns of the cornea caused by use of silver nitrate as a prophylactic measure are reported. In nearly every instance of severe damage, a solution of silver nitrate much stronger than that recommended by the Crede method has been employed. Mistakes in compounding the mixture and mistakes in the selection of the bottles containing the proper strength of solution are blamed for the accident. It has been a common practice for physicians to carry in their bags a solution of 50 per cent silver nitrate for cauterizing of the stump of the umbilical cord. The error occurs when the physician, nurse, or midwife takes drops from the bottle containing 50 per cent solution of silver nitrate rather than from bottles of 1 per cent solution especially pre-

pared for instillation in the eye of the newborn babe. Such accidents can be avoided by the use of a silver nitrate stick for cauterization of the stump of the umbilical cord rather than a 50 per cent solution of silver nitrate. A much better way to avoid such mistakes, however, is the use of wax ampules, each containing enough silver nitrate in 1 per cent solution to be instilled in the eye of the newborn babe. It has become common practice in this country to use the wax ampules.

Another criticism of the Crede method of prophylaxis has to do with the difficulty of instilling drops of silver nitrate solution into the eye of the newborn babe. Some writers speak of the inability to open the eyes so that the solution can be instilled into the cul-de-sac, of the damage to the eye by attempts to evert the eyelid, and even the neglect to use the eye drops because of the urgency to the physician, nurse and other attendants to avert a crisis either for the baby or the mother. The difficulty of a single instillation of silver nitrate solution from a specially designed wax ampule containing just enough of the solution for one application cannot be more than that of making multiple instillations, one each minute for thirty minutes, for a solution of penicillin to be followed by instillation of penicillin once daily for four days. That is the practice in some large maternity hospitals where penicillin has been substituted for the Crede method of prophylaxis. The complaint has been made that the instillation of silver nitrate solution into the eyes of babes usually is followed by an increase in secretion, that is, a blennorrhea, usually mild, and some swelling of the eyelids. Normally, the blennorrhea continues for two or three days but in some instances for several weeks. This is due partly to chemical action and partly to reinfection by bacteria, and partly to a virus. The latter cause is not influenced by the use of any known prophylactic and does not yield satisfactorily to any form of treatment. Fortunately, the reaction and discharge subside without serious sequelae.

As a bactericidal agent, silver nitrate is effective against the gonococcus, staphylococcus, streptococcus, the colon bacillus, and some other organisms. The accepted practice is to cleanse the eyes as soon as possible after birth with a saturated solution of boric acid or 10 per cent

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sodium chloride solution and follow this with a single instillation of two or three drops of a 1 per cent solution of silver nitrate. Evidences of infection that appear three to five days afterwards are to be looked upon as reinfections rather than failures of the prophylactic instillation. The treatment of such cases will be referred to later.

There is no justification on the basis of therapeutic activity to infer that the proper use of the Crede method of prophylaxis is not efficient and practical, as its value has been established by many years of use. The hazards connected with the use of silver nitrate are not inherent in the drug but in the frailties of those who use it.

The persistence of ophthalmia neonatorum raises the question whether obstetricians are as alive to the possible danger of the many varieties of antenatal infection in the mother as they are to the considerably less common danger of maternal gonorrhea. If we consider the two components of the Crede method of prophylaxis, that is, the aseptic and the antiseptic, greater emphasis is placed by some on prophylaxis by asepsis, that is, antenatal treatment of the mother by the Crede toilet to prevent infection from entering the eye of the newborn baby. Undoubtedly, a combination of both methods of the Crede treatment would result in a still lower percentage of infected babies' eyes.

The second point of the proposed change in laws and requirements regarding prophylaxis against ophthalmia neonatorum concerns the effectiveness of a substitute for silver nitrate solution. Striking results in the treatment of ophthalmia neonatorum with the sulfonamides gave rise to the thought that their use may also be as effective in prophylaxis. Consequently, in many hospitals sulfanilamide and its related compounds have been extensively used. In some institutions the instillation of silver nitrate in the eyes has been combined with the systemic use of sulfonamides, and some studies have included only cases that were treated systemically by the sulfonamides and/or antibiotics. In the treatment of ophthalmia neonatorum, sulfanilamide itself proved rather erratic and more was hoped from sulfapyridine with its greater selectivity for the gonococcus, the casual organism in some 30 per cent of cases. In practice, sulfapyridine proved remarkably effective in all types of ophthalmia neonatorum in the staphylococcal no less than in the gonococcal

type. It has been said that the results in ophthalmia neonatorum are so uniformly good that bacteriological examination to establish the identity of the causal organism is almost superfluous. In all clinical cases, a cure may now be expected in as many days as weeks were formerly needed.

Studies of the relative value of sulfanilamide, sulfapyridine, sulfamezathine, and sulfathiazole and sulfadiazine in the treatment of ophthalmia neonatorum show that the effective power of the drugs is essentially the same, but sulfanilamide itself and sulfapyridine are less desirable than sulfamezathine and sulfathiazole and sulfadiazine, as they tend to give toxic symptoms rather more frequently. They have all now been replaced by sulfacetamide in 30 per cent solution and in 10 per cent ointment to be applied directly to the eye.

Penicillin has been found to be the most effective drug against gonorrhreal ophthalmia of all the antibiotics, but it is found to be effective only when applied in high concentration and at frequent intervals. "In a series of 104 cases treated (by Sorsby¹) initially at intervals of one minute for half an hour (with drops in concentration of 2,500 units per ml. in seventy-one cases and a concentration of 10,000 units per ml. in thirty-three cases), the average total time of treatment was thirty-eight hours. This, however, applies to only seventy-seven of the 104 cases, while twenty-seven showed a poor response or relapse." In Sorsby's whole series of 333 cases treated with sulfonamides and 143 cases treated intensively with penicillin, the percentage of failures—assessed by poor response or relapse—was considerable in both series—16.3 per cent with sulfonamides and 23.1 per cent with penicillin. It was pointed out, however, that satisfactory responses could be understood in a relative sense only. In not a single instance was the response so poor as to cause anxiety for the state of the eye, and some of the cases classified as relapses were almost certainly cases of reinfection rather than relapses.

In higher concentrations, the use of penicillin once a day for four days has been found to be effective. At Johns Hopkins Hospital, the following procedure was used in the obstetrical work as a substitute for the Crede method. Upon admission to the delivery floor the mother received 200,000 units of penicillin intramuscularly, this

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being repeated in the event that labor lasted longer than eighteen hours. The newborn baby received 50,000 units intramuscularly within fifteen minutes after birth. This procedure was carried out in 2,512 cases. The period of accurate hospital observation was less than ten days, and the follow-up home observation was unsatisfactory because of the nursing shortage. However, under this regime, there were no observed cases of gonococci conjunctivitis and no reports of such cases in this series from other physicians or hospitals for infectious diseases.

A similar program was carried out in the Sinai Hospital in Baltimore where from April 1, 1947, to May 1, 1948, 2,450 babies received similar penicillin prophylaxis, silver nitrate being omitted. The period of hospital observation was not less than six days. Again, no cases of gonococci conjunctivitis were observed. This record, however, is no better than reports of hospitals using the Crede method only, whereas with the use of silver nitrate, one application is considered sufficient. The instillation of penicillin drops or the injection of penicillin intramuscularly must be repeated for several days to set up adequate prophylaxis. This greatly increases the nursing load in institutions where it is employed and sets up difficulties of administration in general practice outside of hospitals.

Investigations in the use of sulfonamides and of antibiotics continue. As new compounds of sulfanilamide became available, one after another was used, only to be substituted by another compound. Another drug more effective than 30 per cent solution of sulfacetamide may yet be found. At the present time, it seems quite clear that penicillin when used in high concentration is the best agent for the treatment of gonorrhreal ophthalmia. Doses of 50,000 units intramuscularly are now superseded by doses of 200,000 units intramuscularly. The single instillation of one drop of 2,500 units to the cubic centimeter solution of penicillin is known to be inadequate in the treatment of any virulent conjunctival infection. At the present time, 100,000 units of crystalline penicillin G to the gram in ophthalmic ointment opens up new fields for investigation. The end is not in sight.

In the past fifteen years, the development in improved sulfa drugs as bacteriostatic agents has brought about a remarkable improvement in the result of ophthalmia neonatorum, and the use

of antibiotics has still further shortened the necessary time for treatment and greatly improved the chances of recovery without damage to the eyesight. At any time during the past fifteen years, the substitution of a sulfonamide drug or one of the antibiotics for the Crede method of prophylaxis against ophthalmia neonatorum might justly have been brought forward. There is no disagreement regarding the use of drugs for treatment of ophthalmia neonatorum that is once established, particularly if this be caused by one of the common bacterial agents such as the staphylococcus, streptococcus, and gonococcus. Silver nitrate was used in the treatment of ophthalmia neonatorum before the discovery of sulfonamides with rather indifferent results. The Crede method of prophylaxis was set up as a preventive measure and is not recommended as a method of treatment of an established ophthalmia. The commonly accepted etiology of ophthalmia neonatorum is that the eyes of babes are infected by organisms that make their way in between the lids during the process of birth. If these organisms can be removed by cleansing or can be killed by silver nitrate, the development of ophthalmia neonatorum from bacterial source can be prevented. The sulfonamides and antibiotics are bacteriostatic rather than bactericidal. Therefore, to be effective, the tissues of the eyes must be constantly bathed by a drug of sufficient concentration to prevent the development of the bacteria. Compare a single treatment of silver nitrate solution with the necessity of making multiple injections or instillations of penicillin to achieve the same degree of security against ophthalmia, and it is clearly seen that the Crede method should not be abandoned in favor of any other method of prophylaxis.

In the treatment of ophthalmia neonatorum, particularly of gonococcal origin, the use of penicillin instilled into the eye in the form of solution or by use of ointment containing a high concentration (100,000 to 200,000 units per gm.) of crystalline penicillin G, together with the intramuscular injection of crystalline penicillin G once daily, is the method of choice. Chemical conjunctivitis may be seen in the eyes of nearly all babes in which silver nitrate prophylaxis is used. It develops within a few hours after delivery and seldom lasts more than two days. In the majority of cases of blennorrhea following the

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use of silver nitrate, cultures of the secretion from the conjunctiva show no organisms or harmless saprophytes. Inclusion bodies may be found in the secretion and in the scrapings of the conjunctiva in many cases which are sterile for bacteria. It is generally conceded that neither silver nitrate solution, sulfonamides or antibiotics are effective in arresting cases of inclusion body conjunctivitis. While the course is rather long, from three to twelve weeks, and the blennorrhea is annoying, very seldom do ulcers appear on the cornea or other disastrous sequelae occur.

In conclusion, a study of the reports that have appeared in the literature on prophylaxis and treatment of ophthalmia neonatorum since the introduction of sulfonamides and antibiotics impresses one with the efficiency of the Crede method of prophylaxis, its simplicity and the universality of its application. The scope of its effectiveness against various types of infection points out very clearly that as yet no thoroughly suitable substitute has been found. However, in the treatment of ophthalmia neonatorum, whether of gonorrhreal or other bacterial cause, silver nitrate is not the drug of choice. In such cases, there is no doubt of the efficacy of sulfa compounds and of penicillin. The legal requirements of prophylaxis against ophthalmia neonatorum established by law or by regulations promulgated by state departments of health are applicable in every state in the union. Ophthalmia neonatorum is reportable to the local and state health authorities in most states, but a deplorable laxness in the enforcement of the regulations is evident in some states. No suitable substitute for silver nitrate 1 per cent solution as a prophylactic agent has been found in the long list of new bacteriostatic drugs. It is not now conceivable that established health measures should be abandoned until better measures have been indisputably proved. Physicians now have ample leeway to experiment with new methods of prophylaxis without violating the law and without avoiding proper control methods of disease prevention. Those not in a position to experiment with new methods without endangering the eyes of babies should be willing to go along with tested and proved methods. Let's preserve the laws and regulations as they are.

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SPECIFICITY OF THE VITAMINS

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teeth, ill-fitting dentures and other local causes of stomatitis.

Papillary atrophy is loss of substance of papillae of tongue so that an abnormally smooth appearance is presented.

Glossitis is a reddening of the surface of the tongue with or without swelling.

Dry skin or crackled skin is a peculiar mosaic appearance of the skin most frequently found in the lower extremities.

Purpura as perifollicular petechiae.

Folliculosis is a raised papular lesion best described by the term "permanent goose-flesh."

Follicular hyperkeratosis is a raised cornified lesion with keratinized plugs standing out from the hair follicles. The hair is frequently broken.

Edema is pitting edema, in the absence of other clinical causes for this condition.

Neuritis is evident in hyperactive or hypoactive achilles reflex with calf tenderness and cutaneous hyperesthesia, hypoesthesia or anesthesia.

It is with these signs in mind that the assessment of nutritional failure may be made. How many of the above signs must be present to make the diagnosis is not known to me. When I suspect scurvy, I expect to find signs in gums together with purpuric hair follicles; when I suspect pellagra I look for tongue and skin changes; when I suspect beriberi I require some one or several signs of neuritis in the legs; when I find unexplained edema I suspect any other deficiency may be present. It is with these devices and a good bit of guessing that the diagnosis of nutritional failure or malnutrition can be made and vitamin therapy be prescribed. The method of administering vitamins is too banal to need discussion here.

Correction of the diet is necessary for complete and lasting cure.

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The Private Practitioner and Industrial Medicine

By Max R. Burnell, M.D.
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PHYSICIANS IN PRIVATE practice, whether in general practice or in a specialized field, share responsibility with industrial medical departments in helping industry carry out effective health maintenance programs.

I would like to discuss here some of the responsibilities where the functions of the plant physician complement rather than supplant those of the private practitioner. This discussion divides itself readily into two parts: first, the occasions where the industrial physician initiates the referral of an employe to the private practitioner, and, second, when the physician in private practice initiates the referral of his patient to the industrial physician.

Industrial Physician Initiates Referral

In furthering health maintenance programs in industry, the industrial physician is called upon to examine employes at different times and for varied reasons. During the pre-employment examination, the results of these examinations in relation to ability to be placed at work might be classified under the following headings:

1. *Non-disqualifying Ailments*
 - (a) Infected tonsils
 - (b) Deviated septum
 - (c) Moderately high blood pressure
 - (d) Mild diabetes
2. *Temporary Disqualification*
 - (a) Hernia
 - (b) Varicose veins
 - (c) Poor vision
3. *Special Placement Problems*
 - (a) Arrested tuberculosis
 - (b) Epilepsy
 - (c) Heart disease
4. *Disqualifying Conditions*
 - (a) Serious heart disease
 - (b) Malignant hypertension

It can readily be appreciated that in many of these conditions the classification in which the employe is placed depends upon the severity of the

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pathologic condition. In the first two classifications—those of the non-disqualifying and temporary disqualifying conditions—the problem is a simple one. The industrial physician refers the employe to his family physician for treatment.

In the instances where there are special placement problems or serious disqualifying conditions, the private practitioner and the industrial physician share a responsibility that can only be properly discharged when they are in *complete* agreement.

In cases of arrested tuberculosis, or serious heart disease, for example, the family physician should inform the industrial physician as to his opinion of his patient's physical condition. The industrial physician has the responsibility of placing the employe at work which is in keeping with the physical abilities of the employe and in an environment where there can be no aggravation of his disease state.

Differences of opinion are bound to arise in these instances. However, if the family physician is explicit in his information and the industrial physician explains in detail just what the employe is required to do, and describes the environment in which he works, these differences in opinion rapidly disappear.

Next, I would like to discuss the responsibility of the industrial physician in relation to *non-industrial illness or injury*. Any health maintenance program in industry worthy of the name must be built on the foundation of preventive medicine. The industrial physician must be aware of any exposure in the plant that might affect the health of an employe. He must see that these exposures, whether from dusts, vapors, chemicals, et cetera, are under control.

Similarly, the industrial physician should be interested in the employe who comes into his medical department with non-occupational illness or injury. The employe considers his condition to be a trivial one, but to the industrial physician this provides him with his greatest opportunity to further his health maintenance program through "preventive medicine." The industrial physician's role is that of a fact-finding or case-finding agency. It is not in his province to treat these employes. Many of the complaints considered trivial by the employe, too trivial for him in his opinion to consult his own physician, are too often found to be early symptoms of major diseases. Once the industrial physician recognizes this and has referred the employe to his own physician, he has furthered his

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own health maintenance program which has as a main objective the reduction of absenteeism. Numerically this type of referral accounts for the largest number initiated by the industrial physician.

Private Practitioner Initiates Referral to the Industrial Physician

There are four main types of referrals which are initiated by the private practitioner:

1. Reporting any condition suspected to be of an industrial origin.
2. Where changes in jobs are advisable.
3. Conditions justifying absenteeism.
4. Returning to work following such absenteeism.

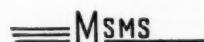
The symptoms of occupational disease frequently resemble those of common illnesses; therefore, a diagnosis of occupational disease must be based on sound *factual* evidence. Consultation with the industrial physician in cases where doubt exists is a responsibility of the private practitioner.

Often the family physician feels that a change in job would be of benefit to his patient. In these instances he should send the patient to the industrial physician with a note giving the diagnosis which explains his reason for requesting such a change. Requests for transfers from one job to another should be limited to those instances where there can be no doubt in the mind of the private practitioner that such a transfer is essential to the health of the individual concerned. The role of the physician is often an unhappy one in instances where his patient is not really ill, but attempts to use minor or imaginary ailments to gain his objective. The industrial physician also is in an embarrassing situation for he *must* limit his recommendations for transfers from one job to another, if one is available, to those employees definitely in need of such a transfer.

Finally, mention should be made of the instances where the private practitioner refers his patient to the industrial physician for leave of absence necessitated by an illness and subsequently requests his return to work. When these referrals are conducted on the same plane that is the custom between fellow physicians, little difficulty arises. Professional courtesy demands, as in the request for job change, that a diagnosis justifying the request accompany such a request. Critical aloofness on the part of either the family physician or the industrial medical director does not further the discharge of their *mutual* responsibilities.

Mr. Leonard Mayo, in an address here in Detroit last week, stated that "the professions do not belong to the membership of that profession, but to those they serve."

I do not expect that you will wholly agree with that statement. However, the fact remains that many do agree with Mr. Mayo. Let us then, by a better understanding of our mutual responsibilities, render service on such a high professional plane that those we serve *jointly* not become bewildered and critical of us—leaving them receptive to ideologies which we *unitedly* oppose.



ESSENTIALS IN PSYCHOTHERAPY

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technical question, how to prevent the development of such an emotional impasse. Correctly timed interruption of the treatment, reducing the frequency of interviews, encouraging certain kinds of experiences in the patient's daily life—all these are technical devices which have been successfully applied in recent years to combat an undue prolongation of the treatment.

As a result of these developments, psychoanalytic treatment is gradually becoming a more flexible, less routinized procedure. Depending upon the nature of the patient's personality and illness, the therapy must be adjusted to fit each individual case. Fundamental psychodynamic knowledge is utilized therapeutically in various ways in different types of cases. Even with the same patient in the different phases of the treatment, the nature of the therapeutic approach must be adapted to the changes in the patient's personality achieved during the course of the treatment. Thus, an introductory supportive therapy may eventually be followed by uncovering techniques. The pedantic distinction between psychoanalysis and other forms of psychotherapy is giving place to a new flexible orientation, according to which the various forms of psychotherapy as well as the classical psychoanalytic procedure are considered as different applications of the universally valid principles of psychodynamics.

All that is needed for oral examination is proper illumination, a finger cot or rubber gloves, a tongue depressor, and knowledge of what to look for.

Avicenna--Philosopher and Genius, Teacher and Surgeon

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*"Abu Ali Husayn Ibn Abdulla Ibn Sina"
(Avicenna) 980-1037 A.D.*

DAILY WE READ of the tremendous progress being made in various fields of medicine and surgery, forgetting often that the discoveries of today are frequently based on the intelligent observations and careful research of ancient men who practiced medicine under most difficult and discouraging conditions. They were truly men of vision, pioneer heroes, who rarely are properly recognized or honored.

Such a genius was the man popularly known as Avicenna, an original thinker, a brilliant leader, an indefatigable teacher. Nearly a thousand years ago, while America was still an unexplored nation inhabited by savages, decades before the Norman conquest of England, while Firdausi, one of Iran's great poets, was commencing on his life work, the glorious "Epic of Kings," there was born of humble parents in the little village of Afshena near Bukhara (then a Persian province) a boy who was destined to become the greatest thinker and scientific writer that Persia has ever produced. His father, who was a Persian from Balkh, had an enviable government job, that of tax-collector for the amir of Bukhara.

Of a religious family, his father being an adherent of the Isma'ili sect, a mystical seeker after truth, this precocious boy had a good education according to the standards of that day, being taught by capable tutors. In his autobiography he modestly admits that at the age of ten he had memorized the entire Koran, and was acquainted with all the Arabic classics! He then turned to the study of grammar and dialectics, philosophy and logic, geometry and astronomy, natural science and Moslem jurisprudence, and if we are to believe his own statements he had developed into a learned scholar and research worker by the time he had reached the age of sixteen. He was never an introvert!

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Knowledge he acquired wherever he could find it, learning arithmetic from a grocer, and higher mathematics from a traveling scholar. Persistence and patience were among his virtues, for he testifies that he read Aristotle forty times, admitting that he could not understand him even after this much repetition. He then turned to the study of medicine and within two years had attained such a reputation as a physician, that when the local Samani ruler, Nuh ibn Mansur, became ill, he was called in to treat him. Having cured his royal patient, he was given, as a reward, the privilege of using the Imperial Library which contained many rare and unique books, and he was thus able to continue his studies in philosophy and science.

This library was later destroyed by fire, and some of Avicenna's jealous detractors did not hesitate to say that he had purposely burned it to enjoy a monopoly of the learning he had acquired from his research from the manuscripts found therein! He early started his career as a writer, and before he reached the age of twenty-one he had written a Commentary on the Law, and a Synopsis of All Sciences, showing even at that age his wide interests and real ability.

His father died when he reached the age of twenty-one, and Avicenna then had to assume the responsibility of supporting himself. In the fashion of the day he first sought service at the court of Ali ibn Ma'mun, the ruler of Khiva, a place where many men of fame were gathered, and where young Avicenna had an opportunity to learn, as well as to display his knowledge.

Sultan Mahmud of Ghazna, the then patron of Firdausi, was filled with envy when he heard of the reputation for brilliance and learning of the court of Ali, and demanded that certain of the most outstanding of the Khiva scholars come to his own court at Balkh. Mahmud's reputation for kind treatment of courtiers was not of the best, and not all who were invited were willing to come; but Shah Ali, realizing that he was not strong enough to protect his circle, advised them either to obey Mahmud's mandate or flee.

Avicenna and one of his colleagues chose to flee, and with much trouble and suffering finally reached Nishapur, where he thought he had found a safe haven. But Mahmud, who was angered that his so-called "invitation" had been refused, caused Avicenna's portrait to be painted and copies distributed throughout Persia, that he might be apprehended and delivered to the court at Balkh. So the young doctor fled again, this time to Jurjan on the Caspian sea, attracted by the fame of its ruler Qabus, as a patron of learning. Unfortunately that gentleman was murdered just as Avicenna arrived, so the young physician remained in seclusion, under an assumed name, and practiced medicine to make a living.

It was while here that he made his celebrated "Diagnosis of Love," a story which has found its way down the centuries in various forms. One is that Avicenna was called to treat a young man of the royal family who had been ill for some months of an unknown disease which baffled all the doctors of the community. Avicenna, whose identity was then unknown, kept his finger on the patient's pulse while he had someone repeat all the names of the various districts and towns in the province. As a certain town was mentioned he felt a distinct flutter of the patient's pulse. Then he had someone acquainted in that town name all the quarters, streets and houses of the town; again a flutter was felt at the mention of a certain house. He then had the names of the inhabitants of that household enumerated, and at a certain name, another distinct flutter appeared. Gravely he announced,

"This young man is in love with such and such a girl who lives in such and such a house in such and such a town. If he will marry the girl he will become entirely well." And he did and was, and Avicenna's fame was made! They discovered then that he resembled the portrait of that Avicenna, who had been ordered to the court of Sultan Mahmud, but nevertheless they treated him with honor and respect and did not send him back to Balkh. During his years at Jurjan he wrote several works on astronomy and logic.

It is not known just why Avicenna left Jurjan, but he and his biographer, Ibn Ali Usaybia, travelled to Ray and entered the service of Prince Majid-ul-Douleh, where he did not stay very long, but travelled 200 miles southwest to Hamadan (the ancient city of Ecbetana), where he chose Prince Shams-ul-Douleh as his patron. The prince soon after developed severe colic which Avicenna was able to cure, and as a reward he was made the prime minister. This caused much jealousy among the military, there were some riots and revolts, and Avicenna was forced to flee for his life. A month later the prince had another attack of colic (possibly appendicitis?) and sent for Avicenna, apologized for his banishment, and asked Avicenna to treat him again. The prince was cured and Avicenna reinstated to his former position of authority. His years in Hamadan were busy ones, practicing medicine during the day, lecturing on medicine or philosophy evenings, or dictating notes for books.

Avicenna not only had an unusually keen mind but an iron constitution and great physical strength. Pleasure-loving and light-hearted, he found relaxation in drink and riotous living, and in political plotting. His treasonable correspondence with Ala-ul-Din the ruler of Isfahan was discovered and Avicenna was thrown into prison. With help from the same friend who had aided him in Jurjan, disguised as a Sufite priest, he escaped, and fled to Isfahan, where with Ala-ul-Din as his patron he reached the height of his fame and glory.

He treated the sick, wrote many books on many subjects, and each Friday held open house for all scholars who wished to come and discuss with him the various sciences in which he was an authority. Here is a description of one of his days given in the Chahar Moqala:

"He used to rise up every morning before dawn and write a couple of pages of Al-Shifa (The Healing). Then when the true dawn appeared he used to give audience to his disciples and to me. We used to continue our

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studies till the morning grew bright, and perform our prayers behind him. As soon as we came forth, we were met at the gate of his house by a thousand mounted men comprising the dignitaries and notables as well as such as had boons to crave or were in difficulties. By the time he arrived the company had reached two thousand. There he would remain until the noon-day prayer, and when he retired for refreshment, a great company ate with him. Then he took his mid-day siesta and when he rose up from this he would perform his prayer, wait upon the king and remain talking and conversing with him until the afternoon prayer."

Finally worn out by hard work and hard living, he died at the early age of fifty-eight while on a journey back to Hamadan, and was buried there, and there his tomb can be seen today.

In his last illness he treated himself unsuccessfully, and thus some of his detractors said that neither could his physic save his body nor his metaphysics his soul. In his philosophy, a form of Aristotelianism, he held that (1) all created things are possible in themselves, but become necessary only by the act of the Creator, (2) the soul of man has two faces, one turned toward the body which forms the practical understanding, the other receptive to external forms which it reproduces in due order.

One of the remarkable features of Avicenna's life is the immediate recognition that his fellow countrymen gave him, and the respect and honor that his name has throughout the world even to this day. Within a few years of his death he was known by such titles as "Chief of Chiefs" and "The Second Teacher" (Mohammed being the first?).

His writings were numerous and voluminous, nearly one hundred volumes in all, and many of these gradually filtered through to Europe, where they were received with great veneration and esteem and translated into the Latin and later into other languages. His enthusiastic reception in Europe was probably due to his skill as a philosopher and theorist rather than as a practicing physician. His elaborate train of reasoning appealed to the Middle Ages, and his writings, even as a Mussulman, were considered quite Orthodox in Catholic Europe.

Most of his books were written in Arabic although a few were in his native Persian, and his range of thought was extraordinary. Most of his books (sixty-eight) were on theology and metaphysics, eleven were on astronomy and natural philosophy, sixteen on medicine and four in verse.

His verse included a number of quatrains, some of which Professor Jackson and other scholars think were "borrowed" and used by Omar Khayam a century later. His most celebrated Arabic poem is that describing the descent of the soul into the body from the Higher Sphere, which is its home, a poem of real beauty. (See Browne's *Literary History of Persia*, vol. 2, pp. 110-111.)

Half of Avicenna's medical works are versified treatises on comparatively unimportant subjects, and according to Dr. Browne they have little value either as verse or as science! The most important, the most famous, the largest and the most accessible in various translations of all of Avicenna's medical works is his "Canon of Medicine" (*Al Qanun fi't-Tibb*), a work which contains nearly 1,000,000 words, and which consists of five books. The first book naturally is rather theoretical and consists of the general principles involved in the diagnosis of disease and its treatment. Each book consists of a number of related essays (*fen*) which are carefully subdivided into chapters and detailed paragraphs, indicating a very fine logical mind. The first essay in Book One is based on various Greek writings defining the fundamental doctrines of medicine and methods. In the second essay, the diagnoses of general diseases are considered, and he goes into great detail about the examination of the pulse and of the urine, making some very interesting observations long since forgotten and now being "re-discovered" by today's scientists. Some of the material naturally has been discarded through the centuries as medicine has progressed, but it is surprising how much is still basically sound. The third essay is on hygiene, and its importance, and in what would today be classified as preventive medicine. In the fourth essay he goes into treatment in detail, telling of the use of the cautery and of bleeding, as well as enemas and purges.

Book Two is really a pharmaceutical dictionary arranged in alphabetical order, based on certain Greek texts but containing descriptions of many remedies which were not known to the Greeks.

In Book Three one finds long and detailed descriptions of many diseases, based on their symptoms and their pathology. He was an excellent observer as well as a skilled teacher, and was able to evaluate the symptoms he had noted. He describes venereal disease, but his chief emphasis is on diseases of the chest and of the gastrointestinal tract.

Book Four includes infectious diseases as well as surgical conditions, cosmetics and toxicology.

The last book, Book Five, is primarily for the compounder, telling how to prepare drugs and containing the most complete *materia medica* that (to that time) had ever been written.

This book (The Canon) first published in 1473 (Milan) became *the* textbook of all of the universities of Europe, displacing the works of Galen and Hippocrates and forming the link between them and modern medicine. It said all that could be said (at that time) on every medical subject, and said it as well as it could possibly be said, and it is no wonder that in addition to various editions in Latin, there were also translations into Greek and Hebrew, and later into modern European tongues.

Avicenna was quite a psychologist and an expert in mental disease, and the following story is told of his treatment of a patient suffering from melancholia, which term Greek students will recognize as meaning "black bile." It seems a certain prince of the House of Buwayh was suffering from the delusion that he was a cow. Daily he would low like a cow, causing annoyance and embarrassment to all of his friends. He would go about crying, "Kill me that a good stew may be prepared from my flesh," until it finally became so serious that he refused to eat, and no physicians were able to help him. Finally Avicenna was called in but he hesitated to come as he was so involved in politics and private business, as well as his literary work. Finally he consented, but first sent a message to his prospective patient that he should be of good cheer, for his requests were to be answered and a butcher would soon be coming to his house to slaughter him and make a good stew of his meat. . . . A little later, Avicenna, holding a large knife in his hand, entered the sick-room, saying, "Where is this cow, that I may kill it?" The patient lowed like a cow to indicate where he was, and Avicenna ordered him to be laid on the ground and bound hand and foot. Then Avicenna felt him all over and said, "Unfortunately he is too lean to be killed now, he must be fattened first." Then they offered him nourishing food of which he now partook eagerly, and gradually he gained strength, got rid of his delusion and was completely cured! Suggestion often played an important part in old Persian medicine even as it does in medicine today.

Avicenna's belief was that all creation was composed of four elements—earth, fire, air and water, in various combinations. There were also four

principals: the hot, the cold, the wet and the dry, and each of the elements partook of two of these principles. Corresponding to the four elements were the four humors generated from the food taken by the mouth. These were called blood, bile, phlegm, and black bile or spleen. If the proportion of these four in a person was perfectly balanced, then the temperament of that person was in perfect harmony, but this was a rare state! Usually there was an excess of one or more humors, or too little of some of them.

Avicenna also taught the treatment still used in Iran by some of the very old practitioners of curing hot diseases by cold remedies, and cold diseases by hot remedies, and for this purpose classified all diseases and all remedies. Thus, theoretically, the treatment of medicine as he practiced it was a perfect science, but actually it was in practice mere guesswork and empiricism, built upon the experience of generations of physicians but not founded on scientific fact or research.

Some writers (Garrison) think that the influence of the "Canon" on the West was bad as a whole, for it confirmed the idea that the use of syllogisms was better than the first-hand investigation of nature, and it marred the progress of surgery by suggesting that it was beneath the dignity of the physician to practice this "manual art," and it was not until many centuries later that surgery was taken from the hands of the barbers and midwives and given its rightful place. In spite of all this, it gave to Europe a standard by which medical practice and scientific theory could be tested, and even Chaucer in his "Pardoners Tale" refers to the writings of Avicenna as those of a man whose works the entire intellectual world knew.

The encyclopedic character of the "Canon," its systematic arrangement, its philosophic plan, its completeness, all tended to raise it to such a height that even today in Persia (Iran) it is considered by the thousands of doctors still practicing "Yunani" (Greek) medicine as the last word of all matters connected with the healing art.

Although it is true that Avicenna's great work is based on the works of his predecessors, Galen, Hippocrates, Al-Razi (Rhazes) and Al-Majusi, and contains much of their thought and many of their conclusions, yet original observations lie scattered throughout his works. Centuries before the discovery of the microscope he suggested that certain diseases were waterborne, the cause being minute animals too small to be viewed by the human eye;

he observed that a disease like malaria could cure epilepsy and other nervous diseases, and that same treatment is being used now for paresis. He was far in advance of his age in his condemnation of astrology and in his attempt to divorce that science from medicine. His discourses on dietetics and hydrotherapy are in line with the most recent research, and his observations on the effect of climate on health would do credit to a modern scientist. Many of the drugs which he recommended are to be found in today's pharmacopeia.

Avicenna has been dead more than 900 years, but his reputation and his works will live on forever. When one can see the great influence one such Persian lad had upon the entire world, it makes one wonder if God in his divine wisdom and power will not raise up another such lad in this age, to influence his own and surrounding nations. Possibly some young man (or woman) entering today upon the study of medicine may become the Avicenna of the twentieth century. There are still many fields to be explored, many opportunities for constructive leadership and provocative thinking, that will produce improved methods of diagnosis and better lines of treatment, as well as prevention and eventually eradication of certain types of disease.

MSMS

Ubiquitous Hosts for 1950 Michigan Postgraduate Clinical Institute and Heart Day:

Guest Speakers and Hosts: George Crile, Jr., M.D., *Gaylord S. Bates, M.D.*; J. Mason Hundley, Jr., M.D., *Ward F. Seeley, M.D.*; Leo G. Rigler, M.D., *Howard P. Doub, M.D.*; Francis E. Senear, M.D., *Harther L. Keim, M.D.*; Walter C. Alvarez, M.D., *Louis J. Bailey, M.D.*; Marion A. Blankenhorn, M.D., *Charles E. Lemmon, M.D.*; Franz G. Alexander, M.D., *Leo H. Bartemeier, M.D.*; Wm. L. Benedict, M.D., *A. D. Ruedemann, M.D.*; Richard H. Freyberg, M.D., *S. G. Meyers, M.D.*; Julian P. Price, M.D., *Glen E. Hause, M.D.*; Isadore Snapper, M.D., *Louis Jaffe, M.D.*; Waltman Walters, M.D., *Joseph A. Witter, M.D.*; F. Bayard Carter, M.D., *R. K. Whiteley, M.D.*; Louis N. Katz, M.D., *John Murphy, M.D.*; Hugh McCulloch, M.D., *Norman E. Clarke, M.D.*; Irving S. Page, M.D., *Warren B. Cooksey, M.D.*

Hosts' names are in italics.

Society seems to have lost all remembrance of the irresponsibility of a writer on human and divine nature. They forget that he is only a reporter, and not at all accountable for the fact he reports. If, in the best use of my eyes, I see not something which people say is there, and see somewhat which they do not say is there, instantly they call me to account as if I had unmade or made the things spoken of. . . . This diffidence of society in authors seems to show that it has very little experience of any true observers—of any who did not mix up their personality with their record. The Arabs of the desert would not forgive Belzoni with his spy-glass for bringing their camp near to him.—EMERSON.

SOME CLINICAL USES OF ENDOCRINE PRODUCTS IN GYNECOLOGY

(Continued from Page 545)

Ankle Edema

Edema can be due to many medical conditions, some of which are serious and need their respective treatment, but do not overlook the fact that edema may be due to hypothyroidism and in such patients will disappear on adequate doses of thyroid.

Conclusions

An attempt has been made to classify patients as to their menstrual history on a purely clinical basis. This cannot be accomplished in all patients but it has been found helpful in large numbers.

The use of the words usually and sometime has a significance. These people may not have all the symptoms or signs mentioned in the four groupings but they still belong to that particular group. Just as at the menopause, a patient may not have the five cardinal symptoms but she may have one, two or three of those symptoms by which you know she has reached the climacteric.

The complaints of each group have been stated and treatment covered.

I hope this will prove of value to physicians in localities where laboratory tests are difficult to obtain and to the physician who wants to give adequate treatment to a patient without sufficient funds to pay for such tests.

MSMS

POEM

By Laureta Dwyer

When I awake and quake with a belly ache
I wanna DOCTOR!

I don't want some clerk or other jerk who in an office
may lurk
To decide where on my hide aid should be applied
I wanna DOCTOR! !

Not for some politician with less brains than ambition
To suggest I'd best get rest or maybe blood test
I wanna DOCTOR! ! !

Why should I wait while they prate, then dictate my
fate?
I wanna DOCTOR! ! ! !

What good to me would it be should folks see
Some slight mistake about my ache brought on my wake
Recovery on paper with me cuts no caper.
When illness I'd quell, so I can get well
Then dammit to hell! ! ! ! !

I wanna DOCTOR! ! ! ! !

History of Circumcision

By Eugene A. Hand, M.D.
Saginaw, Michigan

THE ORIGIN of circumcision is most ancient. The finding of circumcised men in the drawings of the Cave Dwellers¹⁶ dates this custom back at least to the Magdalenian period of the Paleolithic or Stone Age. This is also confirmed by the emphasis on the stone or flint knife in the circumcisional rites of the Jews, the Egyptians,²³ some Arab tribes, and such aboriginal people as the Australian aborigines.

There are some who believe the Jews learned circumcision from the Egyptians during their Egyptian captivity,¹⁶ but this is unlikely, as Abraham's covenant with Jehovah¹¹ occurred prior to this. The belief held by some that the Egyptians learned this from the Jews¹ during this captivity is refuted by the finding of picturization of this operation on bas relief plaques in Egypt dating back to 2400 B.C.²¹ and also the finding of circumcised mummies dating back to at least 1614 B.C.¹⁶

The Egyptians and the Ethiopians at first limited circumcision to the priesthood,¹ whose members also shaved the entire body to denote purity. Circumcision spread from them to the aristocrats and nobility and then to the lower classes, until to be uncircumcised was to be considered unclean.

Circumcision with the Arabs probably started as a fertility or puberty rite. The Arabic word "Hatana" means both to circumcise and to marry, indicating the close analogy in their minds between this operation and reproduction. Female circumcision was done by the early Arabs but was soon discontinued. Circumcision was so common among the Arabs during Ishmael, the Prophet's time, that it was not mentioned in the Koran.¹⁶ It was not until later that the Arabs, who had considered this a physiologic act, gave it a religious significance. As Ishmael was circumcised at the age of thirteen, this age was arbitrarily chosen for religious circumcision. Many tribes still choose seven, fourteen, twenty-one, and twenty-eight days; while the Persian Arabs circumcise at three or four years of age. Jacob¹⁶ described a very sadistic brutal form of circumcision performed by certain Arabic tribes of Yemen in which the rite was

done to determine the youth's fitness for marriage.

Circumcision is first mentioned in the Bible in the covenant between Jehovah and Abraham.¹¹ The Lord promised to make Abraham the father of nations, to make him fruitful at the age of ninety-nine, to give to him and his seed the land of Canaan, to be their God, and to give Sarai, his ninety-year-old wife, a son, making her mother of nations. For this Abraham circumcised himself, his sons, and all the men of his household, slave or free. The date for this is given by authorities as from 1500 B.C. to 850 B.C.²²

Circumcision was not universally practiced by the Jews while they were captives in Egypt. Moses born during their period was uncircumcised. Jehovah was about to smite him down because he did not have this tribal mark,⁸ but he was saved when his wife, Zipporah or Cipora, quickly circumcised their son and threw the bloody foreskin at his feet, thus representing symbolic circumcision. The fact that circumcision was a tribal mark with the early Jews is also indicated when Jehovah forbade the eating of the Passover Feast by circumcised Jew or Gentile.⁹

Joshua again took up the covenant at Gilgal¹² when he circumcised, at the "hill of the foreskin," all the males that had been born in Egypt or in the wilderness. Circumcision was then practiced by the Jews with little change except during the reign of Antiochus IV who tried to prevent them from observing this custom. The eighth day of life was set as the proper time for circumcision when they reached Palestine. This was considered a tribal mark up to the time of the Babylonian exile. During and after this exile circumcision assumed religious importance.

Female circumcision has not been practiced by the Jews.¹⁵

The importance of the rite being performed on the eighth day of life is brought out by the fact that the rite is performed on this day even if it be the Jewish Sunday or even Atonement Day.² It is never performed prior to this day except in case of stillbirth or death prior to the eighth day, in which case a circumcision is performed to symbolize the fact that the child has been introduced into the Abrahamic group.²

Early Mosaic law employed a reasonably good surgical technique, using a flint knife. The rite is performed by a Mohel who may be, but usually is not, a rabbi. The early Mohels recognized blood dyscrasias in families and banned circumcision in

HISTORY OF CIRCUMCISION—HAND

sons of mothers whose first son had bled profusely at circumcision. The child is always examined carefully by the Mohel to determine his ability to stand the operation. If there is evidence that the child could not stand the rite, the act may be postponed, and in the case of prematures the delay may be for a considerable time.²

The Jewish ritual circumcision, *Brith Milah*, is divided into three stages. The first is called *Milah*, which included the actual excision of the foreskin which usually is done with one stroke of a stone or flint knife. The second is called *Periah* which is the tearing of the inner lining away from the excised foreskin. The third is known as *Mezizah* which is the sucking of the bloody wound of the mutilated organ by the Mohel whose lips are wetted with wine. The dangers of this last stage have long been known, and it has been given up by all but the most orthodox. The use of wine during the rite may well be a symbol of this step, now almost extinct. The Mohel of recent years have spilled wine on the mutilated organ to prevent infection.

Sauer¹⁹ reported fatal bronchopneumonia in a child following ritual circumcision by a Mohel in a hospital. Reuben¹⁸ reported forty-one cases of tuberculosis, some with lesion of the penis suggestive of the tubercular chancre of the primary tuberculosis complex, where the Mohel concerned was later proven to have positive sputum. Webster²⁰ reported a case of tuberculosis traced to circumcision in a Gentile following non-ritualistic circumcision.

Kiser¹⁷ stated that circumcision has not been required of proselytes of the Jewish faith since 1892, and that since then it has been chiefly a hygienic measure. Despite this, the term "arelim" or "uncircumcised" is still a word of reproach to a Jew, carrying the implication of being unclean. In modern times the operation is often performed by a physician, but a rabbi is always present to conduct the ritual.

The Phoenicians spread the custom of circumcision which they learned from the Egyptians in their travels through the known world of their time. The Greeks and others who came to Alexandria, Egypt, to study also carried this custom home with them. Circumcision was considered a hygienic measure by these people.

The question whether ritual circumcision automatically led to salvation or whether it was more important to follow the laws of Moses in spirit is

mentioned in the Old Testament in the references to circumcision of the heart.¹⁷

Circumcision as a hygienic measure was known to the people of the Mediterranean world when St. Paul and the other disciples began to spread the teachings of Jesus to these people. The dissension over whether these people should follow the laws of Moses in ritual, as marked by circumcision, or in spirit by good living, led to the parting of Paul and Barnabas. St. Paul³ was not against circumcision, as he caused to be circumcised Timothy, whose father was non-Jewish.⁴

In his epistles to the Romans,¹⁴ to the Corinthians,⁶ the Galatians,¹⁰ the Phillipians,¹³ and the Colossians,⁵ St. Paul taught them that spiritual circumcision or circumcision of the heart was the way to salvation, and not ritual circumcision; that following the word of God and Jesus was the important thing; that circumcision as given to Abraham was the seal of faith, and that Abraham was the father of the faithful, not the circumcised; and that God's blessing would fall on the circumcised or uncircumcised alike if they would be pure of heart. From these teachings early Christians did not adopt circumcision as a religious rite, although some of the higher classes still continued it as a hygienic measure. Some actually avoided circumcision, wishing to be set apart from the Jewish race, as anti-Semitism was even then prevalent.

Circumcision was well known to the Aztecs.²³ From the Aztecs this custom spread to the Incas and also to the various Indian tribes of South and North America. With these people it was a fertility or puberty rite, but may well have also been a form of symbolic sacrifice in place of human sacrifice which they practiced.

Circumcision as practiced by those who came under Semitic influence consisted of excision of the foreskin only. With the primitive tribes of Asia, Africa, North and South America, Australia, and Oceania, circumcision includes any of the various mutilating operations of the male and female genitalia. These include such brutal forms as subincision or whistlecocking, as still practiced by the Australian aborigines, and others not in the scope of this article. Circumcision with these people could not have started as a hygienic measure. The origin must have been as a fertility rite, a puberty rite, a copy of the female defloration rite, or a form of phallic or Istar worship.¹⁶

In certain African tribes¹⁵ a man was considered
(Continued on Page 578)

The Family Physician

The tradition of the Family Physician is deeply etched into the American scene, and it is fitting that the Michigan State Medical Society should give annual professional recognition to Michigan's Foremost Family Physician. As an unblemished synthesis of skilled healer, family counselor, public health instructor, practical psychiatrist, and handy source for job reference, birth affidavit or selfless miscellaneous services, the idealized version of Family Physician has probably never existed. The surprising fact is that so many have so nearly approximated this picture during lifetimes devoted to ameliorating the various physical ailments that normally beset the American family.

Medical progress and social change have radically altered the qualifications of the Family Physician. Some practical psychology, a beard, a bottle of calomel, and a little medical knowledge are no longer sufficient professional equipment, and today's general practitioner is a skilled and well educated scientist, permitted and expected to practice modern medicine and surgery to the limits of his ability and experience. But the need for sympathetic medical contact with the family unit is greater than ever before, even though more difficult of accomplishment. And there are few, if any, areas of medical practice today which offer more opportunity for human service or greater spiritual rewards for the doctor himself.

In the increasing breadth and complexity of modern medicine, adequate medical service without the specializing medical groups is inconceivable. This need for specialization has been paralleled by an increasing emphasis on the importance of the general practitioner who bridges the gap between the specialties and the family—the Family Physician. But it is questionable whether the value of experience in family practice as preliminary to specialization has been fully appreciated. Certainly, the overlapping and interdependence of these two aspects of practice are responsible in great measure for the high general level of medical treatment today. And even more certainly, American doctors must continue to reach into the family unit with medical, human and economic understanding if the physician is to retain his present status in American society.



President, Michigan State Medical Society



*President's
Page*

Editorial

THE LOBBY THAT TAXES BUILT

STRICT LAWS provide that anyone who tries to influence the action of Congress on measures before that body must register as a Lobbyist if he works for hire. Representatives of the American Medical Association and of many of the State Medical Societies have conformed and registered. Penalties for failure to register and report expenditures are severe.

John M. Vorys, Representative from Ohio, in an article in *Nation's Business*, says that agents of the Federal Government work unceasingly for Federal housing, federal power, federal invasion of education, socialized medicine, federal funds for rural telephones, and gigantic new valley authorities patterned after TVA, larger subsidies for public works, extension of wartime controls into post-war era. They want more federal aid for airports, roads, hospitals, forest trails and parks, and a separate national health institute for every major disease which afflicts humanity.

The agents of this Federal lobby on the government payroll swarm the cloakrooms of the House and Senate *without registering*, and they spend more than \$100,000,000 a year, making no reports of expense accounts which by law all lobbyists must file.

A recent report of the Bureau of the Budget to the Hoover Commission reveals that our Federal Government employs 2,327 full-time workers in publicity and public relations. In another group, 1,212 give part of their time to publicity. The salaries alone of these 3,539 aggregate \$13,043,453. Pamphlets and other printed material cost \$45,000,000 a year. And the postage on these would be \$42,000,000 a year.

During the past ten years the Federal Security bureaus have spent over \$20,000,000 in a campaign for socialized medicine. Oscar Ewing's Federal Security Agency is spending \$2,000,000 a year in publicity, and has spent \$1,500,000 for the book "The Nation's Health."*

The final report of the Harness Committee in 1949 said "Whether the immediate purpose of government propaganda is good or bad, the fact

*One thing that has made this possible is we have no overall book-keeping system. A complete financial statement cannot be given at one time. Reports by the carload cannot be correlated.

remains that individual liberty and free institutions cannot long survive when the vast power of government may be marshalled against the people to perpetuate a given policy or a particular group of office holders."

That is the real challenge of government's \$100,000,000 lobby for State Socialism. A numerically small group of willful men are attempting to perpetuate themselves in powerful positions.

If this \$100,000,000 were removed from the direction of the bureaucrats and as much as \$10,000,000 given to the Congress for scientific and research aid, billions would be saved.

SOCIALISM GAINING GROUND!

FOR ALMOST a generation, the Federal Government has been using every effort to secure more control of the health professions, on the pretext that our people could not afford to pay the costs of medical and health care. For the past decade, this ambition has been especially furthered by a small but powerful group of willful persons in the employ of some of the bureaus of the government where they control propaganda. They have enlisted the help and approval of some of our legislators and administrators, even to the very highest level, and have lately spent above seventy-five million a year of our dollars and untold workers' time in their nefarious business, and undermining attempts to misrepresent health care.

State Socialism consists in the State doing the worrying and thinking for the people, giving them "security" in exchange for the loss of their freedom. The Welfare State is urged upon us in glowing terms as something completely good and ultimately to be desired. We do not have to go to England to find out what the result will be. Our Government has already experimented with the Welfare State for seventeen years, and what is the present situation? The program was developed to give the agriculturalists assured income which they gladly accepted, not realizing that for each "benefit" of absolute necessity there would be a corresponding loss of some right or privilege.

A scheme of agricultural support was devised for the benefit of farmers who were suffering dur-

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ing the years of depression. Having a voice in the halls of Congress, plans for support of farm prices and production were made. We all remember our horror at the murder of the baby pigs and the plowing under of the crops. That was a few years ago and was nothing to the present condition of agriculture.

The Agricultural Department now has extended its support program to include potatoes, corn, soybeans, grain sorghums, dry beans, cotton, oats and peanuts. In raising these commodities the farmer is allowed to plant just so many acres, and no more. If he exceeds his allotment he cannot receive support prices or benefits, or sell to the government. The farmer can plant his hills closer together, and thus raise much more. He also uses freely of fertilizer and any other method of securing a greater yield. The Agricultural Department of our State, and doubtless of others, is constantly experimenting at considerable expense to improve the yield. The result?—

The Government's Commodity Credit Corporation now holds as surplus nearly five million bales of cotton, a seven months' supply for the nation's cotton mills, and costing 750 million dollars; 400 million bushels of wheat (900 million dollars) enough to supply a loaf of bread to every person in the United States each week for a year; 600 million bushels of corn (another 900 million dollars) enough to feed all the livestock and poultry of the United States for three months; the C.C.C. also has 70 million pounds of dried eggs, 100 million pounds of butter, and 250 million pounds of dried milk, not to mention huge stocks of tobacco, dried fruit, turpentine, rosin, wool, soybeans, turkey, peanuts.

The scandal of what has happened to potatoes to uphold the price is too recent. The *American Mercury*, quoted by *Reader's Digest*, reports that 31 farmers in Aroostook County, Maine, received checks of \$100,000 to \$450,000 for potatoes; 450 farmers got from \$50,000 to \$100,000. The government bought potatoes in Maine for \$2.90 per sack, shipped them to Chicago at a cost of \$1.10 and sold them for one cent. One farmer paid \$18.00 for 1,800 sacks, fed them to pigs and sold the bags for \$180.00.

Such a story of efficiency in government surely makes us hesitate to submit the administration of the health field to like management. Independent practice has given us the finest health position of any nation. Why exchange a certain security for

the questionable Utopian "SECURITY" of the WELFARE STATE?

"A Department of Government with thousands of employes is daily going about the business of causing all the people of the country to pay higher prices for food."—(Mark Sullivan, *New York Herald*).

A FEW FACTS TO REMEMBER

WHILE CONTEMPLATING the entrance of government in the health affairs of the nation, we might well consider whether the government control proposed is apt to be beneficial.

We have just shown the tremendous surpluses in cotton, peanuts, etc. One would think the government might take thought to avoid the same condition in the future. Not so—The Congress, with the approval of the President has increased the peanut planting by another 100,000 acres in spite of a fifty per cent overproduction. The same act provides that cotton planters may sow another 1,200,000 acres to cotton in spite of an oversupply of \$750,000,000 now on hand. These increases are subject to the same price support now provided. If the price falls below a certain fixed level, and that level is high, the government will buy and hold the commodities off the market. Rules and regulations insure that these acreages will be planted, for if a planter fails to grow his allotted acreage one year he will be refused bonuses and government market if the next year he tries to go back to his original allotment without special approval.

Government control has shown itself to be inefficient and bunglesome. The British government loss on its nationalized railroads is running \$1,000,000 per week. During the first World War Government operation of the United States railroads cost the taxpayers \$2,000,000 daily. Under private operation during World War II the railroads paid the government \$3,000,000 daily in taxes.

Our previous assaying into the Socialist State have been anything but reassuring. WE DON'T WANT ANY OF IT!

NEW NUTRITIONAL STUDY

ONCE AGAIN our surgeons have stressed the important position biochemistry has assumed in so many new achievements in the field of surgery the past decade. At the last Clinical Congress of the American College of Surgeons, a symposium on recent advances in water and electrolyte

EDITORIAL

balance, nutritional problems and related subjects, was presented by several of our leading medical experts who have contributed greatly to this particular subject. The speakers produced an amazing amount of new material in a short time, which was difficult to assimilate in the lecture period allotted them.

Aware of this situation, the College Committee on Water Balance and Nutritional Problems announced that plans had been conceived for the correlation of this information and its presentation in a monograph which would be available to the medical profession at a later date. The committee inferred that material would be added to make a complete summary of the present information on these subjects.

At a recent meeting in Detroit, a state committee on nutritional problems of the surgical patient was organized under the direction of Dr. Frederick A. Coller, to work with the national committee of the American College of Surgeons. This group will study the various aspects of transfusion, parenteral feeding, water and electrolyte balance, etc. This state committee will have the advantage of Doctor Coller's long and extensive experience with water and electrolyte balance, for he has been the chief exponent of this subject in the field of surgery, has published many excellent medical papers on the topic since his original publication in 1932 and has made surgeons everywhere acutely conscious of water balance and parenteral feeding.

Many lives have been saved by the judicious use of blood, proteins, water and electrolytes; complications of surgery have been prevented or greatly reduced, and operations have been made safer. Our present knowledge of the use of these adjuncts to surgery has also permitted us to expand the possibilities of applying operative procedures, and our patients have received untold benefits therefrom.

S.B.W.

ON THE RUN

Until the dentist, physician and patient develop a high index of suspicion regarding any slow-healing lesion or any unusual oral swelling, cancerous lesions will be diagnosed too late.

A mole, suspected of being malignant, should not be fulgurated. It should be widely excised through the entire skin and microscopically examined.

W.M. S. REVENO, M.D.

HISTORY OF CIRCUMCISION

(Continued from Page 574)

incapable of generation unless circumcised. In others it was a form of personal adornment or convenience, and in others it was a sign of reincarnation. In some of these tribal circumcisions the boys were dressed as girls and the girls as boys during the rites which were often prolonged. In the Congo, drugs were used at times during the ceremonies.

The Samoans considered circumcision as a fertility rite, throwing the excised portions of the foreskin to the water lilies, their staple food.¹⁵

From a study of the type of circumcision used by primitive tribes it is possible to reconstruct with some accuracy the paths these tribes took many years ago as they migrated from area to area. This is indicated by the tracing of migration of the Australian aborigines from the Burmese peninsula to Malaya, Sumatra, Java, New Guinea, Cape York and then over Australia by the finding of the custom of subincision or whistlecocking in many of these areas today.

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A Century of Medical Education at the University of Michigan

On the first Wednesday in October of 1850, the Medical School of the University of Michigan, with a faculty of six professors and a building erected at a cost of \$8,981, opened its doors to 90 students for a six months' course of instruction. This marked the dawn of medical education in Michigan. From this humble beginning, more than 10,000 Michigan alumni have gone to all parts of the world to contribute notably and significantly to the advance of medical science.

Contrasted to this start of 100 years ago, the present activities of the Medical School with its 496 students, 118 research projects, 175 faculty members, and extensive affiliated postgraduate teaching program, provide some indication of the development that has taken place.

From its inception, as the Department of Medicine and Surgery, the University's first professional school was dedicated to a threefold purpose: teaching, research and service. That the Medical School was founded on the basis of the advancement of basic scientific principles is clearly exemplified by the appointment of the following members to the original faculty: Dr. Abram Sager (famous for his work in Zoology), President and Professor of Obstetrics and Diseases of Women and Children; Dr. Silas H. Douglass, Professor of Chemistry, Pharmacology and *Materia Medica*; Dr. Moses Gunn, Secretary and Professor of Anatomy and Surgery; Dr. Samuel Denton, Professor of Theory and Practice of Medicine and Pathology; Dr. Jonathan A. Allen (a descendant of Ethan Allen), Professor of Therapeutics, *Materia Medica* and Physiology; and Dr. Zina Pitcher (a member of the University's Board of Regents from 1837 to 1852), Emeritus Professor of Obstetrics.

By 1854 the following members were added to the faculty: Dr. Alonzo B. Palmer, Professor of *Materia Medica*, Therapeutics and Diseases of Women and Children; Dr. Corydon L. Ford, Professor of Anatomy; and Dr. Edmund Andrews, Professor of Comparative Anatomy and Demonstrator of Human Anatomy.

An interesting characterization of the members of the original faculty is provided by R. C. Kedzie,

an assistant to Dr. Gunn, and later head of the Chemistry Department at Michigan Agricultural College, in a letter to Dr. W. F. Breakey, written February 19, 1901: Sager, "exact and methodical most scholarly, but loaded down with so much learning as to make him hesitate 'for fear of some complication not discovered'"; Douglass, "who would spend a whole day to provide some explosive demonstration of a chemical law"; Gunn, "who was always loaded for a daring operation"; Denton, "who advised his pupils to 'keep the bowels of patients soluble' and 'to look out for the sequelae of scarlet fever'"; Allen, "the elegant and scholarly exponent of the facts and poetry of *materia medica*."

No reference to the first beginnings of the Medical School and the original faculty would be complete without some mention of the memorable character, Gregor "Doc" Nagele. His official position was that of janitor and bellringer, but his long association with the anatomist, Dr. Corydon L. Ford, resulted in the development of a proficient capableness when it came to anatomical demonstrations; oftentimes to the chagrin of younger instructors in the field!

The daily routine of the early students bears little resemblance to the comprehensive course of instruction available at the present time. The curriculum of 100 years ago consisted mainly of anatomy lectures and laboratory chemistry. Lectures were given two hours in the morning and two hours in the afternoon four days a week. Wednesday and Saturday mornings were devoted to clinics, such as they were, since until 1868 there existed no semblance of a hospital. The high point of the weekly medical program took place on Saturdays when students read and defended theses prepared on various topics.

Likewise, admission and graduation requirements for the student in 1850 would give the present-day student a feeling of being born just a century too late. Admission prerequisites, as recommended by the National Medical Association, consisted of a knowledge of English grammar, rhetoric and literature, natural philosophy, mathematics through geometry, and enough Latin

A CENTURY OF MEDICAL EDUCATION

and Greek to enable the student to appreciate the technical language of medicine and read and write prescriptions.

To be admitted to the degree of Doctor of

vides an interesting contrast to the present-day curriculum requiring some 4,294 hours of study.

First contact with patients, a memorable occasion to the medical student of any age, occurs



The first home of the University of Michigan Medical School, the Department of Medicine and Surgery Building, as it was in 1850.

Medicine, the graduate had to exhibit evidence of having pursued the study of Medicine and Surgery for the term of three years with some respectable practitioner of medicine including lecture terms; he must have attended two full courses of lectures, the last one at the University of Michigan; he must be at least 21 years old; he had to submit a thesis written by himself to the faculty; and he must have passed a satisfactory examination at the close of his course of study. It should be noted that the lecture courses were six months long; from the first Wednesday in October to the first Wednesday in the following April.

These conditions prevailed until 1877, at which time the course was lengthened to nine months. In 1880, the instruction period was changed to demand three years' time for all students. By the year 1890, the professional course had been extended to four years and entrance requirements had been raised to the level of a high school diploma in the Classical or Latin course.

The length of the 1850 curriculum which amounted to about 500 hours course study pro-

today at Michigan during the sophomore year in the wards of the large University Hospital. No such opportunity was available for the students in 1850. In fact, it was not until 1877 with the construction of the wooden pavilion hospital accommodating 60 patients that such facilities as an operating amphitheater, dressing rooms, and clinical instruction were provided. Nevertheless, even as early as 1851 and 1852 surgical operations were performed before the classes on the Ann Arbor residents who wished to avail themselves of the existent medical knowledge. And in 1868 a professor's residence was made available to be used as a hospital. Physicians brought their patients to this "hospital" early each morning of clinic days, Wednesday and Saturday. Medical students carried them from there on stretchers to the medical school for class demonstrations.

The lack of facilities for clinical instruction was the major cause of the extended controversy which constituted the early medical school's most difficult problem. In 1857 there was a tremendous agitation on the part of several faculty members to have the school moved to Detroit. Many of

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the professors lived in Detroit and probably desired the move in order that they could enjoy the personal advantages of a more extended medical practice. The agitation was quelled only

The inevitable question of women students confronted the faculty, who took the position in 1870 that "in their judgment, the medical-coeducation of the sexes is, at least, an experiment of doubtful



The West Medical Building at the University of Michigan, built in 1903, is one of the two structures which now make up the Medical School. It contains the offices of the Medical School as well as laboratories of the departments of pathology and physiological chemistry.

to arise again with renewed vigor thirty years later. By that time the course of study had been extended from six to nine months, and the removal to Detroit of just the clinical instruction courses was defeated in the best interests of keeping the University all in one place by requiring the professors to live in Ann Arbor during the nine months of the study course.

Another early problem of the medical school centered about the establishment of a Department of Homeopathy. This controversy began in 1867 and by 1875 it achieved success with the Legislature's authorizing a separate Homeopathic Medical College. However, by 1921 enrollment in the Homeopathic Medical School had dropped to a point that seemed inadvisable to continue its existence, so the Legislature passed a resolution requesting the Board of Regents to consolidate the two separate Medical Schools. This the Board of Regents did in 1922.

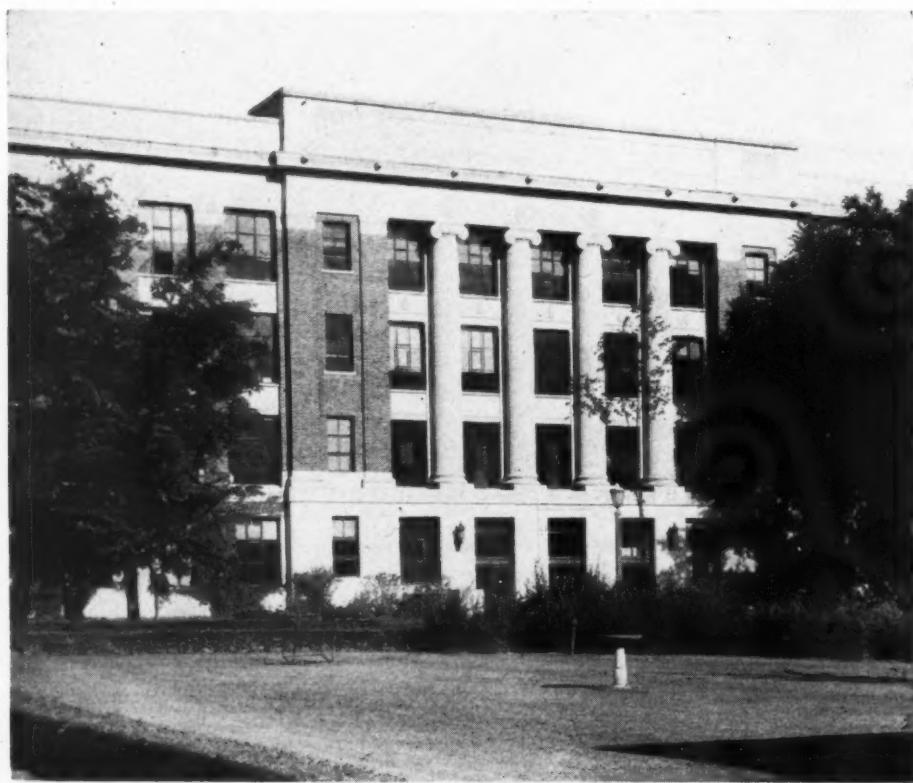
utility and one not calculated to increase the dignity of man nor the modesty of women." However, the historical records of 1870 indicate that a resolution permitting women to attend the Medical School was adopted, and in October of that year 18 women embarked on a medical career. Miss Amanda Sanford of Auburn, New York, is reported to be the first woman graduate of the Medical School. But it must not be left unsaid that it was not until 1881 that separate classes of instruction were conducted for the ladies because of the feeling on the part of the faculty relating to "the difficulties of restraining improprieties of deportment and checking insubordination."

Any understanding of the century of development of the Medical School is almost dependent upon a chronological exposition of the growth of the individual departments with reference to the professors who highlighted the way. Naturally,

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such people as the Deans have played an important role in the over-all development, and they appeared on the scene in the following order: Abram Sager, Samuel Denton, Silas H. Douglass,

after the completion of the new \$6,000 building in 1889, whose timber-supported roofs made the second floor laboratory look very much like a hunting lodge, James P. McMurrich joined the



The East Medical Building at the University of Michigan, erected in 1925, houses the departments of anatomy, bacteriology and physiology.

Moses Gunn, Corydon L. Ford, Alonzo B. Palmer, Victor C. Vaughan, Hugh Cabot, Frederick G. Novy, and Albert C. Furstenberg, the present dean.

These names are inextricably bound up with those many other outstanding individuals that have passed through the laboratories, clinics and lecture halls that constitute the Medical School.

The manner of departmental growth over 100 years is at best a very difficult process to trace in a concise fashion, but the rough outline that follows gives one a fair approximation of how this process took place.

ANATOMY, the backbone of a medical education, had its beginning with the founding of the Department of Medicine and Surgery in 1850. Moses Gunn became the first of a distinguished list of anatomy professors. Closely following him was Corydon L. Ford in 1854 of whom it is said that in his day he probably taught more students than any other teacher of anatomy. Five years

faculty. His thirteen years of outstanding service were terminated in 1907 at which time George L. Streeter became the fourth professor of Anatomy. In 1909 he established the Loan Collection of Bones, thereby greatly improving the teaching of osteology. With his resigning in 1914, G. Carl Huber became the department head. His tremendous interest in neurological material resulted in the development of a laboratory of Comparative Neurology and the collection of one of the world's largest series of brains and spinal cords of various animals. Elizabeth C. Crosby came to work with Dr. Huber in 1920 and has continued to this day to develop new areas in neuroanatomy. The present director of the anatomical laboratories, Bradley M. Patten, famous for his work in Embryology, joined the staff in 1935.

In the second semester of 1880-81, Dr. Henry Sewall began his service in PHYSIOLOGY, and in June 1882 he was made the first professor of physiology at the age of 27. Under Dr. Sewall's

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leadership a new era began in the school. Purely didactic teaching gave way to class demonstrations and to the experimental approach. Dr. Sewall's discovery of the immunization of pigeons to rattlesnake venom is recognized as the forerunner of the development in Europe which led to the finding of diphtheria antitoxin. Closely associated with Dr. Sewall in this period was Dr. Victor C. Vaughan, who became in 1883 the first person in the United States to hold a professorship in Physiological Chemistry on a medical school faculty. He reported that when he began teaching in 1875, the Medical School owned but two poor microscopes. It is related that these two gentlemen and scientists would spend Sunday afternoons sitting on a hill overlooking the Huron River and discuss the "germ theory" of Pasteur and Koch. In 1889, Dr. Sewall resigned because of tuberculosis, and he was succeeded for a brief period from 1890 to 1892 by W. H. Howell. In 1892 Warren P. Lombard became professor of physiology and held this position until his retirement in 1923, at which time Robert Gesell, the present head of the Physiology Department, was appointed.

In 1922, Dr. Howard B. Lewis was appointed professor of physiological chemistry to succeed Dr. Vaughan and the name of the department was changed in 1935 to Biological Chemistry.

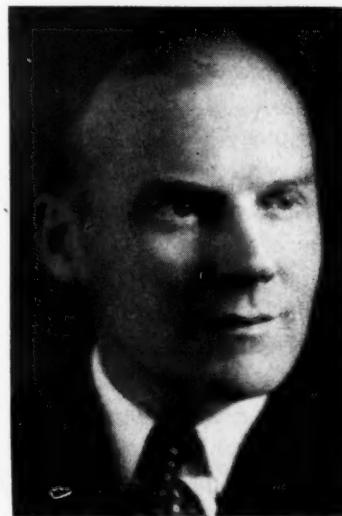
Although HISTOLOGY was recognized as a separate subject in 1877 when Charles H. Stowell taught the course in Microscopical Anatomy, it was not until 1883 that a separate chair of Histology and Microscopy was established. Even as far back as 1869 there are references which indicate that Ford gave demonstrations in histological structures.

Modern PATHOLOGY at Michigan began with the appointment of Heneage Gibbes in 1887, who came from Westminster College, London, England. However, it was under Aldred S. Warthin that Pathology made its greatest strides. He joined the staff in 1891 as an assistant to George Dach of the Department of Internal Medicine, with which Pathology was merged in 1895. Warthin became an outstanding man in the field, raising the standards of Pathology, and doing his epochal work in developing the pathological knowledge of latent syphilis. Warthin died in 1931 and was succeeded by the present chairman of the department, Carl V. Weller.

It is said that Warthin was quite willing that the

students should swear at him while here, if they would swear by him after they were out in the practice of medicine.

With the appearance in 1889 of Charles De



Albert C. Furstenberg, M.D.,
Dean of the University of
Michigan Medical School, 1950.

Nancrede ("I'm a medical who operates") the Department of Surgery began to take shape. He was characterized as "an excellent diagnostician who opposed the then common dangerous practice of exploratory laparotomy as a diagnostic measure." During the war with Spain, he went to Cuba as a Chief Surgeon in the U. S. Army. Following De Nancrede, who died in Detroit in 1921, Cyrenus G. Darling was put in charge of the Department. He was succeeded in 1919 by Hugh Cabot whose "use of double negatives, and of simple earthy figures of speech and allegories served admirably to emphasize certain points which made his discourses vivid and interesting." In 1921 Cabot became dean of the Medical School, resigning this position in 1930. Frederick A. Coller, the present chairman of the Department of Surgery, well known among his contemporaries as an outstanding surgeon and as president of the American College of Surgeons, came to the school in 1920.

With the experimental work by Pasteur that began in 1881, the field of Immunology began to come into its own. So, in order to obtain first-hand knowledge of bacteriological techniques, Vaughan and Frederick G. Novy journeyed to the Hygienic Institute at the University of Berlin in 1888. As a result, the first systematic lectures on the subject began at Michigan in the fall of 1888

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in Vaughan's course, Sanitary Science. However, from 1891 to 1934 the formal lecture course on General Bacteriology was presented by Novy who was made a full professor in 1902. In 1903, because of the frequency of outbreaks of rabies in the state, the Pasteur Institute was set up as a part of the University's Hygienic Laboratory. Novy, who later became dean of the Medical School, was succeeded by Malcolm H. Soule, the present professor of bacteriology.

PHARMACOLOGY began in the modern sense with the appointment of J. J. Abel in 1890 to the Chair of Materia Medica and Therapeutics at an annual salary of \$2,000. Abel's service lasted only until 1893 when he resigned to go to Johns Hopkins University. He was followed by Arthur R. Cushny, acclaimed the father of the idea of the biological assay of drugs. He was an outstanding man and made notable contributions concerning Kidney Physiology and the Action of Optical Isomers. When Cushny left in 1905 to organize the teaching of pharmacology at University College, London, England, Charles W. Edmunds was appointed head of the department. In 1910, Pharmacology was moved from the old medical building to the Chemical Building. Edmunds was succeeded by Maurice H. Seevers in 1941, the present head of the department.

INTERNAL MEDICINE may be said to have had its beginning with the arrival in 1891 of George Dock, who is remembered for his many fine qualities and important innovations he introduced into medical teaching. He was instrumental in organizing laboratory methods of teaching and in reorganizing the course in Oscultation and Percussion. His most outstanding contribution lies in his description of the first case of Coronary Thrombosis. Dr. Dock resigned in 1908 to go to Tulane University, and Albion W. Hewlett was appointed professor of internal medicine. Hewlett was one of the first men to hold the Chair of Medicine whose chief interest lay in the functional rather than in the structural aspects of disease—pathological physiology rather than pathologic anatomy. In 1916 Nellis B. Foster succeeded Hewlett who had gone to Stanford University. He served in this position only a short time and then entered the Army Medical Corps as the United States had entered World War I. On his departure, Harry Newburgh was made acting head of the department. Following the war, Louis M. Warfield received the appointment to professor of medicine

in 1922 and held this position until 1925 when he resigned to go to private practice in Milwaukee. James D. Bruce became chairman of the department for the years 1926 through 1928 at which time he resigned to become chairman of the department of Postgraduate Medicine and Vice President of the University in charge of University Relations. During his chairmanship of Internal Medicine, the Tuberculosis Unit was started, an allergy service was developed and the University received the gift of the Simpson Memorial Institute for Medical Research. Dr. Bruce's vacancy was filled by Cyrus C. Sturgis, the present chairman of the Department of Internal Medicine (with its present membership of approximately 60 members as contrasted to the two members in 1891) and Director of the Simpson Memorial Institute.

For nearly forty years medical students at the University were graduated without having been required to witness a case of labor or a childbirth. However, it is reported that Dr. Sager performed one of the first, if not the first, Caesarian sections in Michigan in 1871. His patient died of peritonitis, and perhaps it was fortunate that Michigan did not have a hospital for twenty years, since almost one-half of the women confined in hospitals died of puerperal sepsis. After the hospital opened in 1877 and until 1898, there were about eleven or twelve confinement cases a year for clinical purposes. In 1901, Reuben Peterson became the professor of diseases of women and children. This marks the beginning of a DEPARTMENT OF OBSTETRICS AND GYNECOLOGY. After thirty years of service, Dr. Peterson resigned as head of the Department of Obstetrics and Gynecology. He was succeeded by Norman F. Miller, the present chairman. With the recent completion of the new Maternity Hospital, facilities for obstetrical and gynecological instruction of medical students are the finest available.

OTOLARYNGOLOGY originated as a separate department in 1904 under the direction of Roy Bishop Canfield. He established his operating room in the basement of the surgical wing of the old hospital built in 1889, beneath the stairway leading to the main surgical amphitheater. Albert C. Furstenberg, dean of the Medical School, is the present chairman of the department.

OPHTHALMOLOGY also came into being as a separate department in 1904 with the appointment of Walter R. Parker as Clinical Professor of the Diseases of the Eye. Upon Dr. Parker's resig-

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nation in 1932, he was succeeded by George Slocum. Unfortunately, Dr. Slocum served only a short while until his death in March, 1933. He was succeeded by F. Bruce Fralick, the present Professor and Chairman of the Department of Ophthalmology.

Closely following these two departments, DERMATOLOGY developed in 1905 with the appointment of William F. Breakey as Professor of Dermatology and Syphilology. Upon his retirement in 1912, Udo J. Wile was made head of the department. Until his retirement within the last year, Dr. Wile had striven to build these clinics into one of the country's most active centers in these fields. His successor and the present Chairman of the Department is Arthur C. Curtis.

PSYCHIATRY AND NEUROLOGY operated as joint departments until their separation in 1920. However, in 1906 Dr. Bair was appointed Professor of Psychiatry and Diseases of the Nervous System. It was in this year that the new Psychiatric Hospital was opened. In the following year, Carl D. Camp received an appointment as Professor of Neurology, and Albert Barrett became Professor of Psychiatry and Diseases of the Nervous System. When the fields were split into separate departments in 1920, Dr. Camp became chairman of the Department of Neurology, a position which he held until his recent retirement. He was succeeded by Russell DeJong. In 1936 Raymond W. Waggoner was appointed Professor of Psychiatry and Chairman of the Department. His present office is located in the Neuropsychiatric Institute completed in 1939 and adjoining the University Hospital.

The present Department of PEDIATRICS AND INFECTIOUS DISEASES may be said to have had its beginning in 1910 with David M. Cowie. He inaugurated pediatrics in the modern sense and is well known for instituting contagious techniques that made it possible to bring contagious patients all under one roof at the same time. It is significant that in this period the present Contagious Hospital was constructed in 1914. Dr. Cowie was succeeded upon his death on January 27, 1940, by Charles F. McKhann. Following Dr. McKhann, James L. Wilson became Professor and Chairman of the Department of Pediatrics and Communicable Diseases, as it is now known.

Although the first reference to ROENTGENOLOGY appeared in a University calendar in 1901-02, it was not until about 1910 that James Van Zwalu-

wenberg first organized an x-ray laboratory. By 1913 a full-fledged Department of Roentgenology had been established. Upon Dr. Zwaluwenberg's death from pneumonia in 1922, Preston M. Hickey was appointed Professor of Roentgenology. It is interesting to note that the first radium owned by the Department was purchased in the year 1928. Dr. Hickey's intensely active and valuable service to the University came to a close with his death on October 30, 1930. In the following January, Fred J. Hodges was appointed by the Regents to become Professor and Chairman of the Department.

The present departmental organization was completed with the establishment in 1924 of the division of ORTHOPEDIC SURGERY under the direction of Carl E. Badgley; the appointment in 1930 of Max M. Peet to Professor of Surgery, who until his death in 1949 was in charge of the division of Neurosurgery; and the appointment of Reed M. Nesbit in 1931 as head of the division of Urology.

The Medical School's outlook at the beginning of its second century of existence points toward a pattern of continued development. Chief encouragement for such a program is derived from the recent generous gift of \$3,000,000 from the Kresge Foundation which is to be used for construction of a Medical Research Center. Additional clinical facilities will be available with the erection of the contemplated Out-patient Clinic adjoining the present 981-bed University Hospital. On the research front activities have been greatly expanded with the signing of a contract for a contemplated five, and possibly, ten year project to be conducted for the Atomic Energy Commission on a study of the biological effects resulting from irradiation exposure. And finally, immediate steps are already underway to expand the freshman class to the unprecedented total of 200 medical students beginning with the fall of 1950.

The most common clinical picture of oral cancer is a coarsely granular ulcer with indurated, raised, rolled edges.

• • •

Cancer of the mouth may be confused with Vincent's stomatitis, herpes, syphilitic gumma and lesions caused by biting mouth tissues.

• • •

Often first indications of cancer of the tonsil, base of the tongue or palate are cervical node metastases.

• • •

If mouth cancer is discovered early, it is relatively easy to treat and the chances of cure are good.



John C. Maxwell, M.D. *"A Half Century of Service"*

The calendar on the wall gave the date as July 2, 1895. A tall young man with a flowing black mustache gazed proudly at the gilt letters on the glass door of his new office, just one floor up from the muddy main street of Paw Paw, Michigan, population 1,700.

The sign read—"J. C. Maxwell, M.D."

Fifty-five years have passed. The muddy main street is now an integral part of bustling US-12. The sign is on another door, still one flight up from the street, and the gilt letters are nearly gone, brushed away by countless hands in search of assistance.

But the sign isn't needed anymore. A half century of devoted and skilled service to the residents

of Paw Paw and Van Buren County have made Dr. John Charles Maxwell's name a byword and his office as familiar as the front parlors of home.

And last summer the men who know best what his service has meant, his fellow physicians of the Van Buren County Medical Society, named him "Van Buren County Doctor of the Year."

It is probably a small honor compared to those medical men who have gone on to win Nobel prizes for research and discovered such modern miracles as sulfa and penicillin. But measured in terms of 2,000 babies delivered without the loss of a mother, thousands of broken bones mended; mumps, measles, whooping cough, pneumonia and common colds overcome; rigorous medical service

JOHN C. MAXWELL, M.D.

during two world wars and an endless chain of emergency calls in snow and rain, day and night, on foot, in horse and buggy and by automobile—then such an award begins to have a personal and human value that no Nobel prize can ever reach.

Dr. Maxwell, now a white-haired man of eighty-four, came to Paw Paw fresh from the University of Michigan Medical School. A native of Hamilton township, near Decatur, Michigan, he had decided to follow the medical footsteps of his brother, the late Dr. James E. Maxwell, who was practicing in Decatur, at the turn of the century.

"Being a country doctor was a tough profession in the old days," Dr. Maxwell recalls. "My first equipment was crude, the medicines and drugs limited and working conditions unbelievable."

Things got a bit better for the doctor in 1908 when he bought his first automobile. But for years the country roads were so poor that he had to go back to the horse and buggy frequently.

Dr. Maxwell's most trying times came during the late days of World War I. In 1917-18 he was the only doctor examining military candidates in the entire county.

"Besides my regular practice I had about 15 soldier-boys a day and around 100 each weekend to examine," he says with a sigh.

But what he likes to remember is that not one man he ever sent to Fort Custer for army service was ever returned for medical reasons. During World War II when he handled hundreds of ear and throat examinations of Van Buren County young men, his amazing record held up.

In November, 1918, the deadly influenza epidemic which swept the United States hit Van Buren County full force. It found Dr. Maxwell the only physician in Paw Paw. For the next three months he worked an average of twenty-two hours a day battling some 600 cases of the influenza along with his regular practice.

And again the invisible but unforgettable record pops up. Of the 600 odd cases of influenza which struck the Paw Paw area, Dr. Maxwell lost only five. And these were mostly beyond aid. Elsewhere in the county the epidemic took thousands of lives.

In the years which followed, Dr. Maxwell has

continued his quiet service to his people. He has taken perhaps five vacations in the last half century and then for only a few days. Until five years ago he never had a hospital nearby. Instead he had to ship his patients by baggage car on the old Fruitbelt Railroad to Kalamazoo, Mich., hospitals.



John Charles Maxwell, M.D., "Michigan's Foremost Family Physician for 1949" displays testimonial scroll to a proud son, James H. Maxwell, M.D., Professor of Otolaryngology at the University of Michigan.

For years his fee was \$1 a call and 50 cents at the office. He sent out bills once a year.

"I guess I've crossed \$100,000 off my books for folks who just forgot to pay," he says.

Dr. Maxwell has also given medicine one of its top men—his son, Dr. James Maxwell, professor of otolaryngology at the University of Michigan, a recognized authority in the field of ear and throat medicine.

A daughter, Katherine Maxwell, has also devoted her life to medicine. She is records analyst at the Rapid Treatment Center in Ann Arbor, Michigan.

The white-haired physician has a simple creed. "The practice of medicine isn't a trade or a commercial thing," he says. "It's a way of life."

Three generations of Van Buren County residents can testify that Dr. J. C. Maxwell, their Doctor of the Year and Michigan's Foremost Family Physician for 1949, has lived it well.

No busy man should object to devoting at least a little of his time to help along others who have fared less fortunately, particularly friends in need of the counsel of experience.

PRELIMINARY OUTLINE OF 1950 ASSEMBLY SPEAKERS

85th Annual Session, Michigan State Medical Society

Detroit, September, 1950

Time	Wednesday September 20	Thursday September 21	Friday September 22
A.M. 8:30	Registration. Exhibits open.	Registration. Exhibits open.	Registration. Exhibits open.
9:00	<i>Surgery</i> RAYMOND W. MCNEALY Chicago, Ill.	<i>Gynecology</i> HEBERT F. TRAUT San Francisco, Calif.	<i>Medicine</i> FREDRICK F. YONKMAN Summit, N. J.
9:30	<i>Medicine</i> CHARLES A. DOAN Columbus, Ohio	<i>Otolaryngology</i> PAUL M. MOORE, JR. Cleveland, Ohio	<i>Syphilology</i> LOUIS A. BRUNSTING Rochester, Minn.
10:00	Intermission to View Exhibits.	Intermission to View Exhibits.	Intermission to View Exhibits.
11:00	<i>Radiology</i> WILLIAM E. CHAMBERLAIN Philadelphia, Pa.	<i>Pediatrics</i> CHARLES F. MCKHANN Cleveland, Ohio	<i>General Practice Period</i> PRISCILLA WHITE Boston, Mass.
11:30	<i>Dermatology</i> EARL W. NETHERTON Cleveland, Ohio	<i>Public Health & Preventive Medicine</i> KARL F. MEYER San Francisco, Calif.	<i>Nervous & Mental Diseases</i> FREDRICK A. GIBBS Chicago, Ill.
12:00	<i>5 Section Meetings</i> <i>Dermatology</i> EARL W. NETHERTON Cleveland, Ohio <i>Radiology</i> WILLIAM E. CHAMBERLAIN Philadelphia, Pa. <i>Urology</i> GEORGE C. PRATHER Brookline, Mass. <i>Gynecology-Obstetrics</i> SAMUEL A. COSGROVE Jersey City, N. J. <i>Ophthalmology</i> HAROLD W. BROWN New York, N. Y.	<i>4 Section Meetings</i> <i>Pediatrics</i> CHARLES F. MCKHANN Cleveland, Ohio <i>Surgery</i> JAMES T. PRIESTLEY Rochester, Minn. <i>Otolaryngology</i> PAUL M. MOORE, JR. Cleveland, Ohio <i>Public Health</i> KARL F. MEYER San Francisco, Calif.	<i>4 Section Meetings</i> <i>Pathology</i> JOHN R. McDONALD Rochester, Minn. <i>Medicine</i> FREDK. F. YONKMAN Summit, N. J. <i>General Practice</i> PRISCILLA WHITE Boston, Mass. <i>Nervous & Mental Diseases</i> FREDRICK A. GIBBS Chicago, Ill.
P.M. 1:30	<i>Pediatrics</i> LEE F. HILL Des Moines, Iowa	<i>Medicine</i> ANTONIO ROTTINO New York, N. Y.	<i>Surgery</i> WILLIAM F. RIENHOFF, JR. Baltimore, Maryland
2:00	<i>Urology</i> GEORGE C. PRATHER Brookline, Mass.	<i>Surgery</i> WILLIAM A. ALTEMEIER Cincinnati, Ohio	<i>Pediatrics</i> WILLIAM L. BRADFORD Rochester, N. Y.
2:30	<i>Obstetrics</i> SAMUEL A. COSGROVE Jersey City, N. J.	<i>General Practice Period</i> WILLIAM F. MENGERT Dallas, Texas	<i>Pathology</i> JOHN R. McDONALD Rochester, Minn.
3:00	Intermission to View Exhibits.	Intermission to View Exhibits.	Intermission to View Exhibits.
4:00	<i>Ophthalmology</i> HAROLD W. BROWN New York, N. Y.	<i>Obstetrics</i> JOHN L. MCKELVEY Minneapolis, Minn.	<i>Surgery</i> WARREN H. COLE Chicago, Ill.
4:30	<i>Surgery</i> HARRIS B. SHUMACKER, JR. Indianapolis, Ind.	<i>Surgery</i> JAMES T. PRIESTLEY Rochester, Minn.	<i>Medicine</i> EDW. L. BORTZ Philadelphia, Pa.
5:00	Discussion Conferences	Discussion Conferences	Discussion Conferences
8:30	<i>Officers Night</i> Biddle Oration J. O. CHRISTIANSON, PH.D. Saint Paul, Minn.	10:00 p.m. State Society Night	END OF ASSEMBLY



PULMONARY EDEMA AND PAROXYSMAL CARDIAC DYSPNEA

"The development of pulmonary edema at night may in certain cases be prevented and in addition effectively treated by intramuscular . . . administration of aminophyllin in dosages of 0.5 Gm."¹

The diuretic action of Searle Aminophyllin frees the tissues of excessive fluid; its myocardial stimulating action improves the efficiency of heart contractions.

G. D. Searle & Co., Chicago 80, Ill.



SEARLE AMINOPHYLLIN*

ORAL...PARENTERAL...RECTAL DOSAGE FORMS

*Contains at least 80% of anhydrous theophylline.

SEARLE RESEARCH IN THE SERVICE OF MEDICINE

1. Barach, A. L.: Edema of the Lungs, Am. Pract. 3:27
(Sept.) 1948.



Michigan's Department of Health

Albert E. Heustis, M.D., Commissioner

The American Board of Preventive Medicine and Public Health has certified seventeen Michigan public health physicians engaged in full-time public health work as qualified diplomates of the Board.

They include A. E. Heustis, M.D., State Health Commissioner; J. K. Altland, M.D., and John A. Cowan, M.D., of the Michigan Department of Health; George C. Stucky, M.D., Director of the Eaton County Health Department; Hugh B. Robins, M.D., Director of the Calhoun County Health Department; Robert F. Hall, M.D., Director of the Isabella County Health Department; W. B. Prothro, M.D., Director of Kalamazoo City-County Health Department; Roelof Lanting, M.D., Director of the Lansing-Ingham County Health Department; J. G. Molner, M.D., Detroit Health Commissioner; Merle R. French, M.D., Director of the Branch-Hillsdale District Health Department; M. R. Kinde, M.D., and B. G. Horning, M.D., of the W. K. Kellogg Foundation, Battle Creek; Thomas Francis, Jr., M.D., of the School of Public Health, University of Michigan; Franklyn H. Top, M.D., Herman Kiefer Hospital, Detroit; M. B. Beckett, M.D., Veterans Hospital, Saginaw; J. P. Gray, M.D., Parke Davis Company, Detroit and I. W. Sander, M.D., of Detroit.

Three other diplomates were in Michigan public health positions at the time of their certification. They are Kenneth Markuson, M.D., formerly with the Michigan Department of Health; Clarence Dale Barrett, M.D., formerly with the Detroit City Health Department and Henry C. Huntley, M.D., who resigned as Director of the Lenawee County Health Department, May 1. All have taken positions out of state.

The February 1950 issue of the *Journal of Immunology* carried a paper on "A Modified Habel-Sockrider Ultraviolet Irradiation Apparatus for Use in Serum and Vaccine Production," prepared by Dr. J. T. Tripp, Virginia Boseman and Beth Berry of the Division of Laboratories, Michigan Department of Health.

The Michigan Department of Health is on the air over Radio Station WKAR, East Lansing at 10:30 a.m. each Tuesday, 870 on your dial.

Broadcasts scheduled for May and June follow:

- May 2—Spoil Your Baby Just Enough—Dr. Goldie Corneliuson, Chief, Section of Maternal and Child Health
- May 9—The Eyes Have It—Miss Caroline Austin, Vision Consultant
- May 16—Iodized Salt—A Michigan MUST—Dr. Albert E. Heustis, State Health Commissioner and Miss Marjorie Delavan, Chief, Section of Education.
- May 23—"The Better to Hear You"—Courtney Osborn, Hearing Consultant
- May 30—What Better Memorial than Health Protection—Dr. Albert E. Heustis, State Health Commissioner

- June 6—Flies Can Cross Your Borders—LaRue Miller, Chief, Section of Environmental Sanitation
- June 13—Tips for that Trip Away from Home—Dr. Albert E. Heustis, State Health Commissioner
- June 20—Building or Buying a Dream: Sanitary Requirements—John Hepler, Director, Division of Engineering
- June 27—Home Care of the Sick—Miss Helene Bunker, Chief, Section, Public Health Nursing

The main laboratory and the branch laboratories of the Division of Laboratories, Michigan Department of Health, have been equipped with sufficient supplies of snake anti-venin. These laboratories will handle calls 24 hours a day, seven days a week for this serum. The individuals in the various laboratories who may be contacted are as follows:

Lansing Laboratory

Mrs. Julia Hopkins—Telephone No. 4-4936
Mrs. Marion Baker—Telephone No. 5-0617

Grand Rapids Laboratory

Dr. P. L. Kendrick—Grand Rapids 7-2151
Miss Katherine Chase—Grand Rapids 8-2877
Mr. Henry Sikkema—Grand Rapids 5-1492

Houghton Laboratory

Miss Ora M. Mills—Houghton 209R
Mr. Kenneth Carbaugh—Houghton 2257W

Powers Laboratory

Miss Marian Sprick—Hermansville 5576
Mrs. Mildred Pellegrini—Norway 5294

The Michigan State Police have been notified.

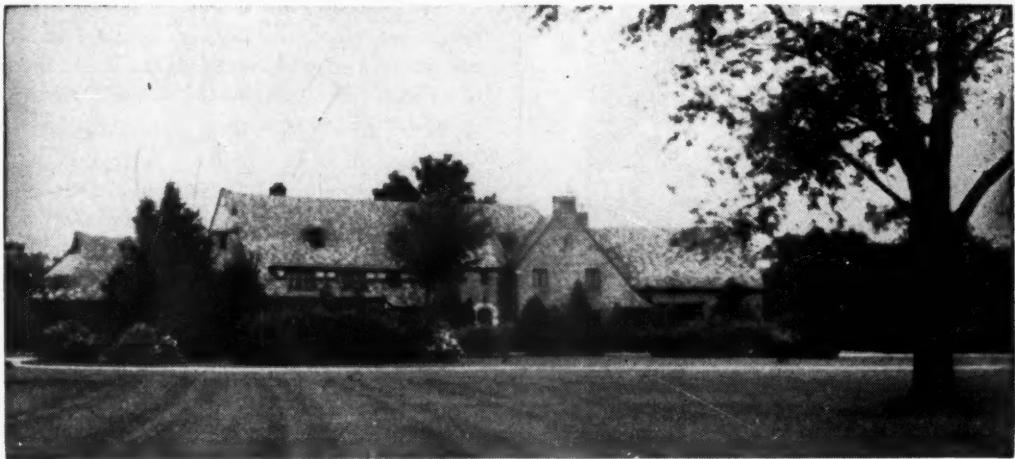
To expedite the Michigan vision conservation program, the Michigan Department of Health and Michigan State Normal College are co-operating in a short course to train additional vision screening technicians for employment in local areas of the state.

Local Health Departments and schools are being urged to find the persons they wish to have trained to do the vision testing locally. Services of the vision consultant of the Michigan Department of Health will be available to help with educational phases of the vision conservation program in areas where there are trained technicians to do the testing.

For the short course which will be held in Ypsilanti, June 26 to 30, some subsidies are available. Registrations will be limited to those recommended by the local health departments and schools. They should be made through the Section of Recruitment and training of the Michigan Department of Health.

Five mobile tuberculosis case-finding units of the Michigan Department of Health will make chest x-rays at Michigan's summer fairs and festivals. Their visits are now being scheduled. The mobile units which use 70 mm. film will be sent to as many fairs as possible. The fair surveys reach many people who otherwise

(Continued on Page 592)



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MICHIGAN'S DEPARTMENT OF HEALTH

(Continued from Page 590)

would not have chest x-rays. A total of 51,724 persons had chest x-rays at 32 Michigan fairs and festivals last summer. The x-rays revealed 1,318 chest abnormalities of which 485 were suspect reinfection tuberculosis.

Approximately sixty water treatment plant operators in the state will take examinations for certification on June 7, 1950. Certification assures competent qualified operators and thus protects the safety of municipal water supplies. The examinations will be held in Grand Rapids, Lansing, Detroit and one Northern Peninsula city.

Revised rules and regulations for tuberculosis control were given immediate effect by the Governor of Michigan, February 23, 1950. The revisions cover many phases of tuberculosis control. Copies of the revised regulations can be obtained from the Division of Tuberculosis and Venereal Disease Control, Michigan Department of Health.

A five-year two-fold program of instruction and research in family living will be developed at Wayne University under an \$8,000 grant from the Michigan Department of Health. The program will have two objectives. One will be undergraduate information and research in family living. The other will be an integrated multi-professional program in child growth and development and family living as a part of professional education.

Report of the 1949 ragweed pollen survey of the Michigan Department of Health will be printed in the May issue of "Michigan Public Health" which will be out in late May. Reprints of the report, which include maps showing areas of least pollen concentration and fewest days with significant pollen concentration in 1949 and past years, will be available without charge from the Michigan Department of Health.

The Michigan Department of Health's fair side show method of venereal disease education, which in its first two years gained national attention and set the pattern for some other states, will be continued this year.

The fair tent-show technique brings venereal disease educational materials to the midway where they reach many people who would not be reached by the other usual channels of educational information.

More than 34,237 saw the educational motion pictures and received venereal disease facts at eight county fairs last year.

A new sound-color-film on diagnosis of breast cancer prepared for professional groups has been added to the Film Loan Library of the Michigan Department of Health. Other new films and strips cover such subjects as preparation of the baby's formula, dairy plant sanitation and farm fires.

"Breast Cancer: The Problem of Early Diagnosis" a

(Continued on Page 594)



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The MF-49, adaptable to all recognized diathermy technics, is illustrated here with the contour applicator. Air-spaced electrodes, induction cable, and electrodes for cuff technic can also be used. A smooth current is provided for minor electrosurgery.

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An Observation on the Accuracy of Digitalis Doses

Wthering made this penetrating observation in his classic monograph on digitalis: "The more I saw of the great powers of this plant, the more it seemed necessary to bring the doses of it to the greatest possible accuracy."¹

To achieve the greatest accuracy in dosage and at the same time to preserve the full activity of the leaf, the total cardioactive principles must be isolated from the plant in pure crystalline form so that doses can be based on the actual weight of the active constituents. This is, in fact, the method by which Digilanid® is made.

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Clinical investigation has proved that Digilanid is "an effective cardioactive preparation, which has the advantages of purity, stability and accuracy as to dosage and therapeutic effect."²

Average dose for initiating treatment: 2 to 4 tablets of Digilanid daily until the desired therapeutic level is reached.

Average maintenance dose: 1 tablet daily.

Also available: Drops, Ampuls and Suppositories.

1. *Wthering, W.*: An account of the Foxglove, London, 1785.
2. *Rimmerman, A. B.*: Digilanid and the Therapy of Congestive Heart Disease, Am. J. M. Sc. 209: 33-41 (Jan.) 1945.

Literature giving further details about Digilanid and Physician's Trial Supply are available on request.

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DETROIT 28, MICHIGAN

(Continued from Page 592)

16 mm. sound-color-film produced by the American Cancer Society, shows in animation and clinical photography how the physician can reduce mortality from this most common site of cancer among women. It shows the complete examination including inspection, palpation and transillumination, and biopsy, the only certain means of distinguishing between benign and malignant tumors, and concludes with a discussion of the physician's role in the post-operative management of the patient, and with a plan for thorough examination, accurate diagnosis and effective treatment. It is for professional groups only.

Official steps and agreement have been completed by the Washtenaw County Board of Supervisors and the City Council of Ann Arbor to bring about the merger of their health departments effective July 1, 1950. The resulting health department will serve Washtenaw county in its entirety and will be known as the Washtenaw County Health Department. The address of the county health department will be retained.

Venereal diseases in Michigan are giving way before the concentrated treatment, contact-tracing and education programs.

New syphilis cases have declined more than half (51.6 per cent) since the peak year of 1946. The 1949 total of 8,740 new cases was the smallest number reported since 1937. The greatest decline was in infectious primary and secondary syphilis cases where the total was about one-fourth that of 1946. For the first time in ten years, the incidence of congenital syphilis showed a decided decrease. During the past ten years, an average of 500 cases was reported each year. In 1949 the number was cut to 368.

New gonorrhea cases reported in the state have declined about one-fourth (24.5 per cent) since the peak year, 1946. The 1949 total of 9,427 cases of gonorrhea was the smallest number reported since 1942.

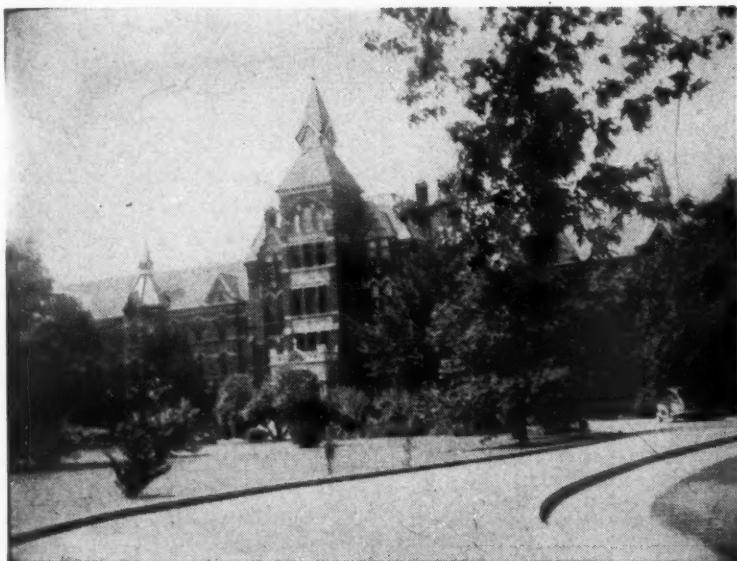
Much of the decline in venereal disease in Michigan can be credited to the use of penicillin in treatment of both syphilis and gonorrhea, to the operation of the Michigan Rapid Treatment Center in Ann Arbor, to speedy contact tracing by health departments and to the broader use of educational information.

More than 12,000 cases of venereal disease, mostly infectious primary and secondary syphilis have been treated in the Michigan Rapid Treatment Center, Ann Arbor, since it opened in 1944. During the past year, free penicillin for the treatment of gonorrhea has been made available to physicians of the state, through the Michigan Department of Health.

Recent foreign visitors in the Department included: E. B. O'Grady, representing a veterinary biologics house in Buenos Aires, Argentina; Dr. Gerda Ludwig, a German psychologist, Dr. Kusomoto, Chief of Health Centers, Ministry of Welfare, Japan; and Maria Steffens, a nurse from Weisbaden, Germany.

• Licensed by State of Michigan, Dept. of Mental Health • Registered by American Medical Association

ST. JOSEPH'S RETREAT



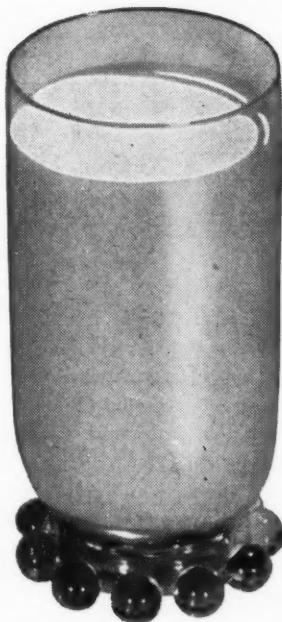
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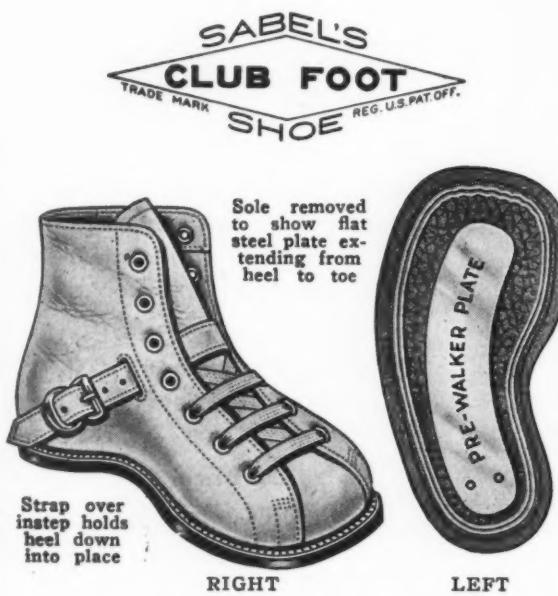
Buttermilk in the bottle is in the same state which sweet milk reaches when it is first acted upon by the digestive juices. Therefore it is partially pre-digested. Moreover, there is little chance of it forming hard, tough curd-masses in the intestinal tract.

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THIS is the new Club Foot shoe designed and made for infants to be worn until the child can stand or walk alone. The "PRE-WALKER" Club Foot shoe can be worn by the infant at all times, and also can be kept on while the child is in bed. Its function is to keep the foot in the exact position that the physician has obtained.

As the infant progresses to the point of walking or standing alone and further corrections are required, then the regulation Sabel Club Foot shoe can be used until the fixation desired has taken place.

The Sabel line includes, in addition to the Pre-Walker, the Sabel Club Foot, Brace, Pigeon-Toe, and Surgical shoes.

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Communications

My Dear Dr. Foster:

This is to let you know how much I appreciated my visit to Detroit and the program of The Fourth Annual Michigan Postgraduate Clinical Institute.

I enjoyed, especially, the Discussion Conference on Cancer—by Crile, Diehl, Senear, Moore and Price. They are great men.

The talk by Dr. Penberthy was just right before a public meeting. Dr. Thieme's discussion of gall bladder disease and the paper on the use of vitamins were practical and timely.

In part all the papers and discussions were of high class. The paper by Dr. Hill of Grand Rapids was excellent, but too much for a twenty-minute discussion. The paper by Dr. Maxwell was timely, practical and showed many points of value for the men in general practice though a little rough on some who demand a larger fee for questionable radium treatment. Now, Dr. Foster, I want to thank you, especially, with Doctor Barstow and all the members of the Michigan State Medical Society for the interest they have shown in choosing a "Doctor of the Year." I am very happy to have had the honor scroll presented to me. It is something I can hand down to my children and grandchildren.

Very sincerely yours,
J. C. MAXWELL, M.D.
Paw Paw, Michigan

March 13, 1950

March 10, 1950.

Mr. Carl L. Gray, Jr., Administrator,
United States Veterans Administration,
Washington, D. C.

Dear Sir:

At a meeting of the Michigan State Board of Registration in Medicine on October 11, 1949, the policy of the Veterans Administration in permitting veterans to attend foreign medical schools at the expense of the United States Government was presented and discussed at considerable length. The Michigan Board in 1928 adopted a Regulation and Rule, which is a promulgation of the Medical Practice Laws of Michigan, Act 237, Public Acts of 1899, as amended, stating that the Michigan Board will accept applicants who are graduates from only Class A Medical Schools within the continental United States to the Board's examination or licensure by interstate reciprocal endorsement. Therefore, the Board unanimously adopted the following Resolution:

"WHEREAS, It appears that the Veterans Administration is advising veterans that they may attend any foreign medical school at the expense of the United States Government, and,

"WHEREAS, Such foreign medical schools are not inspected, classified and approved by an acceptable and

(Continued on Page 598)

Homewood Sanitarium

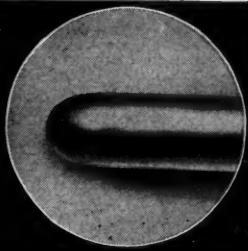


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F. H. C. BAUGH, M.D.C.M.
Medical Supt.

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(Continued from Page 596)

recognized accrediting organization in the United States, and,

WHEREAS, Such graduates of foreign medical schools are not eligible for registration and licensure in the State of Michigan, therefore,

BE IT RESOLVED, That the Michigan State Board of Registration in Medicine deplores the present policy of the Veterans Administration in this respect and urges that their policy be changed, and

BE IT FURTHER RESOLVED, That a copy of this Resolution be sent to the Michigan Veterans Administration, and other interested parties.

Sincerely yours,
MICHIGAN STATE BOARD OF
REGISTRATION IN MEDICINE
JEM:s J. EARL MCINTYRE, M.D., Secretary.

March 24, 1950.

Mr. W. W. Boyles, Field Representative,
Michigan Medical Service,
Washington Boulevard Building,
Detroit 26, Michigan.

Dear Mr. Boyles:

In answer to your inquiry concerning our interpretation of the Michigan Medical Practice Act on the use of X-Ray films and their use as a diagnostic service, will state that your interpretation as contained in your letter is correct. We have searched our files and cannot find record of having given Mr. Fred J. Picknell, Administrator, or any other officials or doctors of medicine of Monroe Hospital, any interpretation of the Law as your letter states.

For your information and guidance, I am enclosing a marked copy of the Medical Practice Laws of Michigan, defining the practice of medicine. During my past twenty-two years of service on the Michigan State Board of Registration in Medicine, we have had various complaints against the Monroe Hospital, and the most common were charges of doctors of medicine who were not licensed in Michigan associated with or operating in that hospital. Most of them doctors licensed in Ohio, but not in Michigan, but operating in the Monroe Hospital.

You will note that the Medical Practice Act provides that a medical doctor may call in an out-state doctor not licensed in Michigan for consultation, but that does not mean he has any right to perform any medical service to or for the patient. Any citizen or resident of Michigan has the privilege of going to another state for x-ray films and their interpretation, and a doctor in Michigan may use them if he so chooses, but an out-state doctor has no right to come across the border in Michigan to examine the patient and make diagnosis, unless he is registered and licensed to practice medicine in Michigan.

I have referred your letter to L. A. Potter, Investigating and Law Enforcement Officer of the Michigan Department of Health, and the Michigan State Board of Registration in Medicine for his information and guidance. I trust the above satisfactorily answers your questions, and will be of service to you.

Sincerely yours,
J. EARL MCINTYRE, M.D., Secretary.
JEM:s

Excerpts from letter from an English housewife.

What a pity that this medical question has taken such a hold on Truman's mind—and I do wish that the rank and file wouldn't think it "something for nothing" because it isn't. Every person in the country is taxed

(Continued on Page 600)



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COMMUNICATIONS

(Continued from Page 598)

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5/- a week—that's about \$1.00 in ordinary exchange and the doctor is paid something between 16/- and 18/- a year for each patient. What sort of service is he going to give for that? He does just what you'd expect—as little as possible and often grudgingly at that. I do wish men from the United States wouldn't come here, listen to "officials" and then go back to say that the "scheme is working very well." As a scheme, it is; as a medical system, it's a mess.

The troubles are not apparent to the casual glance, but are very real just the same. The whole thing is dreadful. I was amused the other day when—(husband) broke his glasses and called up the oculist who has looked after him for years. The secretary said, "If it is on the National Service, we haven't an appointment for three months, but Dr. — can see Mr. — tomorrow morning if he is still on the private list." He can't see a line of print without glasses, but that wouldn't have made any difference.

I had a fall last week, tore ligaments in my ankle, and the doctor thought I'd broken the thing and wanted it x-rayed. Though I am still his private patient, he asked me if I'd like it done on the National; if so, the films could be made about six miles away, but could not be read until the *end of the week*. Since it was Monday, I thought it would be better to go to Leicester, fourteen miles, and get a report in the afternoon by telephone.

Like everything else, it is a most dreadful muddle imaginable—with no heart and little interest on the part of the doctors and not a scrap of faith on the part of the patient. We all, private as well as panel, suspect the good will of any doctor who is on the scheme. It is affecting the attitude of nurses. I notice that my doctor hasn't much confidence in any of them. The dangers of it all are so insidious. It is more like the slow change of a fairly good man losing his strength of character by degrees until he is completely without any sense of moral responsibility at all. One can't sentence him to gaol until he has been convicted of a crime, but his friends and neighbors know he is wrong just the same.

I think I'll have to put up a sign, "Don't mention medicine," over my desk, though probably I'd not pay much attention. I feel so very strongly that this is one of the real *evils* of the times that I have to talk about it.

As you know, we are getting excited about the elections. There isn't much hope from the masses who pat their pockets and look with glee at the wasted big houses and shabby estates—even though they know that no pound buys more than it used to—not as much in fact, but it sounds more and those who had private fortunes haven't them any more. They've gotten even with the "rich." Some of the propaganda is piped down hoping that those of the middle classes who voted for them before will do it again, if not too frightened. The Labor Party, promising to nationalize still more, has a strong hold, and it is anybody's guess as to what will

(Continued on Page 602)

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\$25.00 weekly indemnity, accident and sickness	Quarterly
\$10,000.00 accidental death	\$16.00
\$50.00 weekly indemnity, accident and sickness	Quarterly
\$15,000.00 accidental death	\$24.00
\$75.00 weekly indemnity, accident and sickness	Quarterly
\$20,000.00 accidental death	\$32.00
\$100.00 weekly indemnity, accident and sickness	Quarterly

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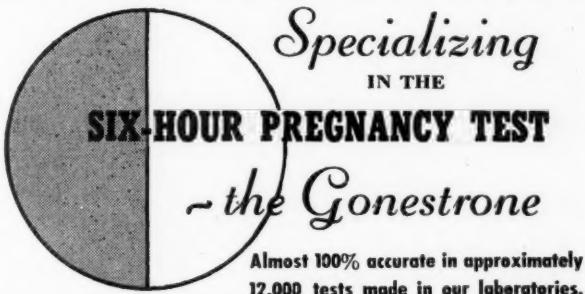
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Woman's Auxiliary

FIRST CALL TO STATE AUXILIARY MEMBERS

The twenty-fourth annual meeting of the Woman's Auxiliary to the Michigan State Medical Society will be held at the Hotel Statler, Detroit, Michigan, September 19, 20, and 21, 1950.

Start making plans now to attend this meeting. Come, help us with our program for next year and have fun with us, too. Visit the hospitality room or the President's suite, where you will meet and visit with old friends and make new ones.

AMA AUXILIARY MEETING

Mrs. Don R. Wright, Flint, President of the Woman's Auxiliary to the Michigan State Medical Society, announces that the twenty-seventh annual meeting of the Woman's Auxiliary to the American Medical Association will be held June 26 to 30, 1950, in the Fairmont Hotel, San Francisco. Mrs. Clifford Long, chairman of the Committee on Arrangements for the national auxiliary meeting, has issued a cordial invitation to all auxiliary members to participate in the social functions and general sessions.

COMMUNICATIONS

(Continued from Page 600)

be the result. Some of the top conservatives are really hopeful, but then so are the village men in the pubs, and there are more of them to make crosses! And if we do win, how this dreadful mess can ever get straightened out I can't imagine. Sometimes, I almost wish that Mr. Marshall hadn't made a loan at all and England who is always so fine with her back to the wall, but far too easy going any other time, would have had to fight. Sometimes, I think she'd have done it, though the Labor Party wouldn't have stayed in office very long.

Why will people who won't allow any one but an expert to touch their car or radio fail to heed the advice of highly trained professional men and trust their very lives to anyone regardless of training or education who promises them hope?—MSMS Cancer Committee.

The Society for Investigative Dermatology

will hold its

Eleventh Annual Meeting

at the Clift Hotel, San Francisco, California,
on Sunday June 25, 1950

(See Archives of Dermatology and Syphilology,
May, 1950, for Scientific Program).



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NEWS MEDICAL

Michigan Authors

Russell N. De Jong, M.D., Department of Neurology University of Michigan Medical School, wrote the "Foreword," in *The Journal-Lancet*, Neurology Issue, March, 1950.

Henry F. Vaughn, Dr. P. H., of Ann Arbor, published an article, "Air Pollution Institute: Introduction," in *Industrial Medicine and Surgery*, March, 1950.

Carey P. McCord, M.D., of Detroit, published an article, "The Physiologic Aspects of Atmospheric Pollution," in *Industrial Medicine and Surgery*, March, 1950.

C. J. Velz, M. D., of Ann Arbor, published an article, "Pollens: Sampling and Control," in *Industrial Medicine and Surgery*, March, 1950.

Meyer O. Cantor, M.D., of Detroit, published an article, "Effect of Variations in the Amount of Mercury on the Speed of Intestinal Intubation," in the *Archives of Surgery*, April, 1950.

* * *

Blue Shield of California.—The California Physicians Service on February 1, 1950 announced the broadening of its coverage to include twenty-three of the most dreaded and generally most expensive afflictions. For an additional charge members of the CPS will be able to receive extended treatment for cancer, tuberculosis, diabetes, polio, pernicious anemia, and nearly a score of other listed ailments. The new "catastrophic coverage" provides two years, or \$5,000 worth, of medical surgical and technical services for these twenty-three ailments. The cost for a family of three or more will be \$1.95 a month. Hospitalization is not included under the terms of this CPA contract, but is available under the basis CPS contracts. This plan is sold only in groups and in the northern districts of California.

* * *

Veterans Administration.—The endless stream of human problems which Veterans Administration helps to solve every year is reflected in the 15,500,000 personal interviews that VA employees conducted with veterans, their dependents or beneficiaries during the last fiscal year. The problems involved benefits administered by VA under laws enacted by the Congress. . . . It provided medical care and hospitalization for a daily average of 107,000 veteran-patients in VA and non-VA hospitals. It furnished nearly 5,000,000 outpatients medical treatments and over 763,000 outpatient dental treatments. At the end of the fiscal year, 2,313,545 veterans were receiving disability compensation, pension or Army retirement pay from VA. In addition, 960,000 dependents of deceased veterans were drawing death compensation or pension payments.

Bon Secours Hospital—

The third annual clinic day of Bon Secours Hospital, Detroit, will be held Tuesday, June 6, 1950. The program will include the following presentations:

Morning Session—9:00 a.m.

JAMES BLAIN, M.D., *Chairman*

Preoperative and Postoperative Diabetic Care

T. H. Heenan, M.D.

Hemochromatosis **R. J. Reichling, M.D.**

Cardiac Emergencies **Hugh Stalker, M.D.**

Significance of Isolated Pulmonary Lesions **George Belanger, M.D.**

Bleeding Peptic Ulcer **R. L. Fisher, M.D.**

Management of the Irritable Colon **R. C. Connelly, M.D.**

Intermission—10:30 a.m.

Morning Session (Continued)—10:45 a.m.

HUGH STALKER, M.D., *Chairman*

Lower Nephron Nephrosis **William Flora, M.D.**
Modern Trends in Surgery of the Colon

D. Sweeny, Jr., M.D.

Multiple Primary Malignancies Involving the Colon **J. F. Wenzel, M.D.**

Indications for Cholecystotomy; New Technique **James Blain, M.D.**

Management of Prolonged Labor **R. C. Swanson, M.D.**

Congenital Absence of Vagina; Case Report **G. B. Ohmart, M.D.**

Evening Session—8:00 p.m.

DONALD ROSS, M.D., *Chairman*

Hyperthyroidism in Children **I. G. Downer, M.D.**
Menstrual Toxins **J. A. Kasper, M.D.**

Ocular Fundi Observed in Premature Infants **C. W. Lemard, M.D.**

Surgical Treatment of Cancer of Nose and Paranasal Sinuses **B. Proctor, M.D.**

Significant Lesions of the Oral Cavity **G. R. Maitland, M.D.**

Comments Regarding the Etiology of Bronchial Asthma **L. H. Bartemeier, M.D.**

* * *

Antihistamine for Colds.—The Federal Trade Commission made public on March 24, 1950 its complaint against advertising claims for Kriptin, sold by Whitehall Pharmacal Co. Three days earlier it placed similar charges against Resistabs (Bristol-Myers) and Anahist (Anahist Co. Inc.). Hearings are scheduled for April 28. Food and Drug Administration does not consider the action to be in conflict with its grant of permits for manufacture of the products and their sale under proper and precautionary labeling. (More than 100 different-named proprietaries in this antihistamine, anticold line have been granted FDA permits). Its antibiotics division, meantime, is preparing to terminate certification of penicillin-G batches April 1 and speculating on what the

(Continued on Page 606)

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(Continued from Page 604)

medical profession's response will be to terramycin, which goes on the market for first time this week—first antibiotic to receive FDA approval for general use since aureomycin and chloramphenicol were released about a year and a half ago. Note: FDA is happy over Federal appellate court decision in New Orleans upholding conviction of seller of an abortifacient drug and closely following progress of current Chicago trial involving a "health tube" device.—WRMS, March 27, 1950.

* * *

Hoover Chief Advisor to Health Information Foundation.—Washington observers noted with interest the appointment of Herbert Hoover as chairman of the citizens' advisory committee to Health Information Foundation. His association with this newly formed organization, in the light of his espousal of numerous governmental administrative reforms now under consideration on Capitol Hill, may well have long-range results bearing significantly on the Federal government's whole medical establishment. Incidentally, House hearings on a United Medical Administration—advocated by Hoover Commission—are now scheduled to open on Wednesday, having been postponed one week. Note: Federal Security Administrator Oscar R. Ewing is not permitting rumors that he seeks New York's governorship curtail his campaign of speechmaking in support of compulsory health insurance.—WRMS, March 27, 1950.

* * *

New Directory Shows One Doctor for Every 750 Persons in U. S.—The United States at the beginning of 1950 had one doctor for every 750 persons. This is the best showing for any nation in the world, with the exception of Palestine where a temporarily high ratio exists because of an influx of refugee doctors.

Next to the United States, the largest supply of doctors in relation to population exists in Great Britain where, based on latest available official figures, there was one doctor for 870 persons. Other countries in order are: Iceland, 890; Denmark, 950; Canada and New Zealand, 970. Other nations range from 1,100 persons per doctor to 25,000 persons per doctor, a situation which exists in China.

The ratio for this country was revealed by Dr. George F. Lull, Chicago, secretary and general manager of the American Medical Association. It was based on an estimated national population of 151,000,000 and 201,278 doctors whose names will be continued in the eighteenth edition of the *American Medical Directory*, to be issued about June 1.

"This is the largest physician population in the history of the country," Dr. Lull said. "The previous directory, published in 1942, showed 180,496 names for the United States. The increase is due principally to the graduation of new doctors by medical schools.

"The directory will contain 47,399 names for the first time. These additions were partially offset by 26,617 deletions for deaths or other causes.

"In 1930, there was an estimated 154,500 doctors for a population of 122,775,000, or one doctor for every 795 persons.

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NEWS MEDICAL

The new directory will contain 2,913 pages, or 112 more than the previous record volume issued in 1942. It will list the names, year of birth, medical school and year of graduation, specialty, if any, and addresses of physicians in Canada and the United States dependencies, as well as of those in the United States.

The total listing will be 219,678 physicians. The 1942 directory contained 201,272 names, including 4,209 doctors in the Philippines. The Philippines are no longer a dependency of the United States and have been dropped from the new directory.

"On the basis of the new schools that are being organized and the expansion of existing schools that is now under way, the freshman class in the medical schools of the United States will shortly exceed 7,000 students, an all time high," he pointed out. "The average size of the freshman class in the 10 years preceding the war was 6,016."

* * *

Fewer VA Beds for Non-service-connected Cases.— Closing of five military General Hospitals by June 30, as scheduled, will mean still fewer beds available in VA hospitals for veterans with non-service connected ailments. At present, VA has 1,800 patients in the hospitals scheduled to be shut down. It is expected that a high percentage of these will have been released by June 30. The remainder will be absorbed in VA's own hospitals, whether service or non-service cases. In anticipation of this, VA will withhold beds that might otherwise be used for non-service cases. This is the second development within a week pointing toward less care available for non-service patients. Earlier VA said that it would have fewer beds available for these cases as a result of a personnel reduction in its medical and hospital departments.

* * *

Senator Hunt (D.-Wyo.) made a speech on the Senate floor January 30, the day his National Health Insurance bill, S.2940, was introduced. He pointed out that only those families whose gross income totaled less than \$5,000 would be eligible under his bill to apply for coverage. He stated that *79% of all the families of the United States are in the \$5,000, or lower, income bracket.* S.2940 is silent on how or if medical fees would be set, and no reference was made in his speech addressed to this point.

* * *

Representative Martin (R.-Mass.) submitted figures to the House Ways and Means Committee relating to Federal expenditures for grants-in-aid to the states, showing that in 1946 the total was \$645,000,000 and by 1948 had reached \$1,418,000,000. Included in the total were the following items in which the medical profession might be interested: Public Health, \$39,252,000; maternal and child health and welfare, \$21,409,000; old-age assistance, \$573,304,000; aid to dependent children, \$141,738,000; and aid to the blind, \$16,947,000.

* * *

Major General R. W. Bliss, Army Surgeon General, has selected twenty-six civilian and three Army physicians to participate in an Overseas Consultant Program including seminars and clinics for overseas physicians,

MAY, 1950

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interclinical conferences, hospital tours, and inspection of facilities for overseas care.

* * *

Townsend Plan.—Advocates of the Townsend Plan for National Insurance occupied the attention of the Finance Committee for two days in February. In addition to Dr. Townsend, his son, and the statistician of the plan, Senators Sheridan Downey and Claude Pepper, who sponsored S.2181, embodying the Townsend Plan, testified. They protested that H.R.6000 does not provide adequate support for the aged. Mr. Townsend, Jr., pointed out that the aged would be allowed as little as 85 cents a day which would not even pay for their food. Under their plan, it is proposed that all persons sixty years of age or over who have retired, the totally blind, the totally and permanently disabled, and widows with dependent children under eighteen would be covered with a pension of \$150 per month, this pension to be produced at the start by a tax of 3% on the gross income of persons and companies with certain exemptions.

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"A Century of Medical Education at the University of Michigan"—the feature article in this number (Page 579) was prepared by A. C. Furstenberg, M.D., Dean of the University of Michigan Medical School, in collaboration with Joseph H. Fee, Science Reporter of the University of Michigan. The Editor expresses his appreciation for this interesting and informative delineation of the University of Michigan's progress in medical education during the past century.

J. Norris Asline, M.D., Bay City, James E. Cole, M.D., Highland Park, and Leonard M. Gaydos, M.D., Detroit, represented the Michigan State Medical Society at the course in "The Medical Aspects of Atomic Warfare" held at Western Reserve University Medical School, Cleveland, the week of April 3. The school was sponsored jointly by Western Reserve and by the United States National Security Resources Board of which John Steelman is Director.

James A. Waggener, Public Relations Director of the Indiana State Medical Association, Indianapolis, was a visitor at the MSMS office Friday, March 16. During his visit he observed the organizational and public relations activity of our State Society.

Special AMA Train—Chicago to San Francisco.—The Illinois State Medical Society is sponsoring a special train to San Francisco for the AMA annual session in June and has invited all members of the Michigan State Medical Society to join with the Illinois doctors in making the trip west in a pleasant and happy manner. For details, write Secretary Harold M. Camp, M.D., Illinois State Medical Society, Monmouth, Illinois.

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The American College of Chest Physicians will hold its 16th annual meeting at the St. Francis Hotel, San Francisco, June 20 through 25, 1950. For program, write the College at 500 N. Dearborn Street, Chicago 10, Illinois.

C. J. Golinvaux, M.D., of Monroe is President of the Michigan Chapter.

* * *

A Chicago restaurateur, Joseph Christensen, writes the following: "I cannot put M.D. after my name but I can, at least for a while, still put U.S.A. As a consequence, please accept the enclosed check for \$25 as a slight token of regard for my doctor and all his colleagues. These are my 'dues' as a citizen, and I hope they will help in your fight against socialized medicine. A people without guts are soon a nation without guts, and if it should become necessary to remove any part of mine, I want to pick my man and pay his charge without a precinct captain getting his nose in my anatomy."

* * *

The University of Illinois College of Medicine, Chicago, announces a course in Endocrinology, May 15 to 20, 1950, under the direction of Willard O. Thompson, M.D., Chicago. Maximum registration will be 100. Fee for ACP members is \$30; for non-members, \$60.

For information, write Dr. Thompson at 700 North Michigan Avenue, Chicago 11, Illinois.

* * *

Alexander W. Blain, M.D., of Detroit, was especially honored on his sixty-fifth birthday. The bulletin of the Alexander W. Blain Hospital was dedicated to its founder in Detroit, March 4. Fifteen scientific papers were contributed by students who had a portion of their surgical training under his guidance. Other contributors were Dr. Frederick A. Coller of the University of Michigan, Ann Arbor, President of the American College of Surgeons, and Dr. John R. Boland, associate physician at the Blain Clinic since 1911.

* * *

Veterans Administration announced on March 3 that it had reduced its personnel force by approximately 7,800 jobs. The reduction will be nation-wide and will include all activities of the VA with 3,000 employees in hospitals and homes and 4,000 in other activities included.

* * *

Immunization Publicity.—The St. Clair County Medical Society members and health director, C. C. Benjamin, M.D., recently co-operated in a newspaper publicity campaign to interest parents in necessary immunization procedures of their children.

The following pithy news items appeared in one daily and seven weekly newspapers in St. Clair County: "All babies born in November, 1949, should be taken to their family physician to be immunized against whooping cough," and "Children born in 1947 should be taken to their family dentist for an oral examination."

Co-operation does pay!

* * *

"Pulmonary Edema as Related to Anesthesia" is the title of a Discussion Conference to be held by the an-

MAY, 1950

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SURGERY—Intensive Course in Surgical Technic, two weeks, starting May 15, June 19, July 24. Surgical Technic, Surgical Anatomy and Clinical Surgery, four weeks, starting May 1, June 5, July 10. Personal Course in General Surgery, two weeks, starting September 25. Surgery of Colon and Rectum, one week, starting May 15, June 5. Esophageal Surgery, one week, starting June 5. Breast and Thyroid Surgery, one week starting June 26. Thoracic Surgery, one week, starting June 12. Gallbladder Surgery, ten hours, starting June 19. Fractures and Traumatic Surgery, two weeks, starting June 12. Basic Principles in General Surgery, two weeks, starting September 11.

GYNECOLOGY—Intensive Course, two weeks, starting June 19, September 25. Vaginal Approach to Pelvic Surgery, one week, starting May 15.

OBSTETRICS—Intensive Course, two weeks, starting June 5, September 11.

PEDIATRICS—Personal Course in Cerebral Palsy, two weeks, starting July 31. Personal Course in Diagnosis and Treatment of Congenital Malformations of the Heart, two weeks, starting June 5.

MEDICINE—Intensive General Course, two weeks, starting October 2. Electrocardiography and Heart Disease, two weeks, starting July 17. Liver and Biliary Diseases, one week, starting June 5. Gastroscopy, two weeks starting May 15, June 12.

UROLOGY—Intensive Course, two weeks, starting September 25. Cystoscopy, Ten Day Practical Course, every two weeks.

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esthetists of Michigan in Suite 500 of the Book-Cadillac Hotel, Detroit, on Friday, September 22, at 12:00 noon, on the occasion of the MSMS Annual Session.

Harry C. Kurtz, M.D., of Detroit will be discussion leader.

For luncheon reservation, contact H. J. Van Belpo, M.D., 522 Medical Arts Building, Grand Rapids 2, Michigan.

* * *

The American Medical Golfing Association's Thirty-fourth Tournament will be held at the Olympic Club of Lakeside, San Francisco, on Monday, June 26, 1950, the opening day of the AMA Annual Session. One hundred twenty-five trophies and prizes will be placed in competition in ten events, featuring gross and net scores in both 36- and 18-hole competition. Luncheon and banquet at Olympic Club. For entry blank, write Bill Burns, Secretary, 2014 Olds Tower, Lansing 8.

* * *

The Upper Peninsula Medical Society's Fifty-second Annual Meeting at Houghton on June 23-24, 1950, will feature an excellent scientific program. Among the outstanding speakers are: Francis D. Murphy, M.D., Milwaukee; Harold Walder, M.D., Duluth; E. D. Spalding, M.D., Detroit; John E. Faber, M.D., Rochester; LeMoyne Snyder, M.D., Lansing; James L. Wilson, M.D., Ann Arbor; Arnold Jackson, M.D., Madison; Lawrence Reynolds, M.D., Detroit; Vernon L. Hart, M.D., Minneapolis; Howard H. Cummings, M.D., Ann Arbor; W. J. Troop, M.D., Green Bay, and Joseph C. Gemeroy, M.D., Detroit.

At the Friday, June 23, luncheon, two prominent speakers will present several socio-economic matters of importance to the medical profession.

Paul D. Bagwell, Lansing, Professor of Speech at Michigan State College, will address a public meeting, Friday evening, June 23.

All MSMS members are cordially invited to the Upper Peninsula Medical Society meeting. Make hotel reservations through R. E. Hillmer, M.D., Painesdale, Michigan.

Pulmonary Tuberculosis—22.8 per cent

Of 14,591 handicapped persons in Michigan who benefited from rehabilitation services in 1948-49, 68.7 per cent had a disease disability. About one-third of these—22.8 per cent—were incapacitated by tuberculosis. In addition, tuberculosis constituted almost one-fourth of all disabilities served during this period. *In terms of a single disease, and in terms also of any single disability, tuberculosis was the highest.*

Michigan Tuberculosis Association



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Acknowledgment of all books received will be made in this column, and this will be deemed by us as a full compensation to those sending them. A selection will be made for review, as expedient.

MITCHELL-NELSON'S TEXTBOOK OF PEDIATRICS. Edited by Waldo E. Nelson, M.D., Professor of Pediatrics, Temple University School of Medicine; Medical Director of Saint Christopher's Hospital for Children. With the Collaboration of Sixty-Three Contributors. Fifth edition. 426 illustrations; 19 in color. Philadelphia: W. B. Saunders Co., 1950. Price, \$12.50.

The latest printing of this standard text appears with some 300 additional pages added to the 1,352 of the previous edition. It makes a bulky volume. One well understands the statement in the Preface: "The problem of encompassing the various aspects of child care in a single volume is becoming an increasingly difficult one." Notwithstanding the difficulty, however, the task has been well done, and the present text is as complete and up-to-date as any we have seen.

The following sections are new or are completely rewritten: Growth and Development, Congenital Malformations, Inborn Errors of Metabolism, Anaesthesia for Children, Immunity and Allergy, Streptococcal Infections, The Use of the Viral Diagnostic Laboratory, Histoplasmosis, Congenital Heart Disease, Mental Deficiency, and Burns. Other sections have been completely revised.

It is particularly noteworthy that all sections contain material so new that it is hardly in the Journals. As an illustration, it is our impression that the rather dramatic results from the use of female donors in the treatment of Erythroblastosis was first publicly presented by Diamond in San Francisco in November, 1949, yet it is included in the section on The Blood in this book published in January, 1950. There are many other examples of the inclusion of brand new material.

This volume has always been a desirable addition to the library of the practicing physician. It is rapidly becoming a "must."

H.F.B.

INTESTINAL INTUBATION. By Meyer O. Cantor, M.S., M.D., F.A.C.S., Assistant Attending Surgeon Grace Hospital, Formerly Senior Attending Physician Deaconess Hospital Detroit, Michigan. Springfield, Illinois: Charles C. Thomas, 1950. Price, \$7.50.

This, the first book of its kind, answers most of the problems which confront all of us who use the long tube to prepare a patient for operation, use it for treatment, or use intestinal intubation postoperatively routinely. An amazing list of 237 references covers everything that has ever been written in the field of intubation, there are many case histories to illustrate all types of intestinal obstruction, and all of the uses of the long tube that one can imagine. The x-ray plates accompanying case histories are excellent. Over 500 case histories are presented in the 279 pages, the author's cases, and more than 95 per cent were intubated successfully without fluoroscopic control.

The history and development of duodenal tubes, and later the long tube is dealt with completely, the anatomy of the gastrointestinal tract which requires study in the successful passage of the long tubes, and the physiology of intestinal obstruction and the changes accompanying long periods of intubation. Techniques of passing the

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various types of tubes are described well, along with measures which are most helpful in overcoming obstacles. The Cantor tube technique is discussed in detail.

There are excellent chapters on small bowel disorders, atony, paralytic ileus, and other conditions for which the long tube is needed. The large holes in the Cantor tube seem most advantageous in the presence of paralytic ileus, and again when it is desired to give small amounts of barium orally to outline a point of obstruction. The most brilliant results with the Cantor tube are found in the obstructions resulting from peritonitis, the latter forming a very high percentage of clinical cases requiring intubation. Other conditions discussed include band obstruction, strangulated hernia, mesenteric thrombosis, intussusception, etc. Long tube intubation as used in large bowel obstructions, and in the treatment of diseases of the colon is also thoroughly discussed, with a timely chapter on the errors and safeguards of intubation. The reader is warned of the danger of waiting too long after decompression, lulled by the comfort of the patient

whose obstructive symptoms are relieved, before undertaking corrective treatment.

Other topics well handled are the nursing care of the intubated patient, the responsibility of the surgeon in the use of the long tube, the role of the roentgenologist, and a chapter on experiments carried out by the author to demonstrate the effect of intestinal gases on the balloons used with long tubes. All in all, the topic has been handled very completely, and this book would make a most useful addition to your medical or surgical library.—S.R.W.

QUESTIONS MEDICAL STATE BOARD AND ANSWERS. By R. Max Goepp, M.D., Formerly Professor of Clinical Medicine, Graduate School of the University of Pennsylvania, and Professor of Medicine, Woman's Medical College of Pennsylvania; and Harrison F. Flippin, M.D., Associate Professor of Medicine at the Graduate School of the University of Pennsylvania. New, 8th Edition. 663 pages. Philadelphia & London: W. B. Saunders Company, 1950. Price, \$7.00.

The first edition of this volume appeared in 1909. It is now eleven years since the last revision, and the changes in medical science have been profound. Hence, much of the book has been revised and rewritten completely. The book contains almost six hundred pages of actual questions asked on State Board examinations, and the correct and accepted answer. The index is extensive, and the book will serve most valuably for students who anticipate taking such examinations.

THE PHYSIOLOGY OF THOUGHT. A functional study of the human mind in action. By Harold Bailey, M.D., F.A.C.S. New York: The William-Frederick Press, 1949. Price, \$3.75.

The text appears to be mainly a presentation of the author's own views and ideas. The book is written in a style that might appeal to laymen, but yet his ideas are cloaked with neuro-anatomical terminology that would be difficult to follow without technical knowledge. This subject is always interesting, and the author has taken



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great liberties with it, viz.: He only mentions briefly the sense centers in the brain and he appears to group all the psychoneuroses under the heading of neurasthenia. He believes that thought is a function of nerve cells. Consciousness results from stimulation of the sense organs. Impressions received through the sense organs plus thought results in memory. Memory is not a space-occupying change in the brain but the product of physiological function of the brain cells. Instincts are inherited memories. Latent memories manifest by certain talents are also inherited. Memories are active during sleep, but there is no memory after death. He mentions four or five states of consciousness. Rapid and intense thinking accompanies emotional expression. The brain cells fatigue like any other cells of the body and then neurasthenia is the result. Hallucinations result from an impairment of thought function, be the course what it may. Memory becomes defective, emotions are no longer under control, sense impressions wrongly interpreted. Concentration is weakened and judgment is unreliable.

The book is interesting and can be read hurriedly. It is not a textbook, and only the reader can determine its value to him.

G.K.S.

DISEASES OF THE FOOT. By Emil D. W. Hauser, M.S., M.D., Associate Professor of Bone and Joint Surgery, Northwestern University Medical School; Attending Orthopedic Surgeon, Passavant Memorial Hospital, Chicago. Second edition. Illustrated. Philadelphia: W. B. Saunders Co., 1950. Price, \$7.00.

Hauser has given the medical profession an excellent treatise on the foot in his second edition of "Diseases of the Foot." The fundamental concepts of functional treatment are clearly outlined, and the chapters remain unchanged from the first edition. Also, the treatment of congenital deformities and orthopedic conditions are dealt with in the manner so adequately described in the previous edition. A great deal of new material has been

added on circulatory disturbances, and all of the various entities are thoroughly discussed as to etiology, symptoms and treatment, and the uses of antibiotics and anticoagulants in foot conditions has been added to this volume. Fractures and dislocations are discussed in a limited manner only, inasmuch as the author concerns himself primarily with diseases. The chapter on bone tumors seems somewhat inadequate.

On the whole, this is a very useful and valuable book for all who are confronted with "foot problems."

P.C.K.

THE CYTOLOGIC DIAGNOSIS OF CANCER. By the Staff of the Vincent Memorial Laboratory of The Vincent Memorial Hospital, A Gynecologic Service Affiliated with the Massachusetts General Hospital, Boston, Massachusetts. The Department of Gynecology Harvard Medical School. Published under the sponsorship of the American Cancer Society. Philadelphia: W. B. Saunders Co., 1950. Price, \$6.50.

This book is beautifully and excellently illustrated. The pictures and comment on cytological alterations due to radiation are particularly good and the illustrations of neoplastic and normal cellular elements in the urinary, gastric and pulmonary secretions are unique and have not appeared previously in book form. The material on pleural and peritoneal fluids is good but could have been expanded. The oncological correlation, as far as the pathologist is concerned, is weak. The frailties attendant with this type of cytological diagnosis of cancer are delicately soft pedaled, and a review of its merits compared to biopsy is so controversial that it probably should be ignored both in this review and in the book.

This book is highly recommended, but the reader should peruse the preface prior to reading the text, and also reflect on the fact that without the sponsorship of the American Cancer Society this excellent work would not be available at such a reasonable price.

A.A.H.



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